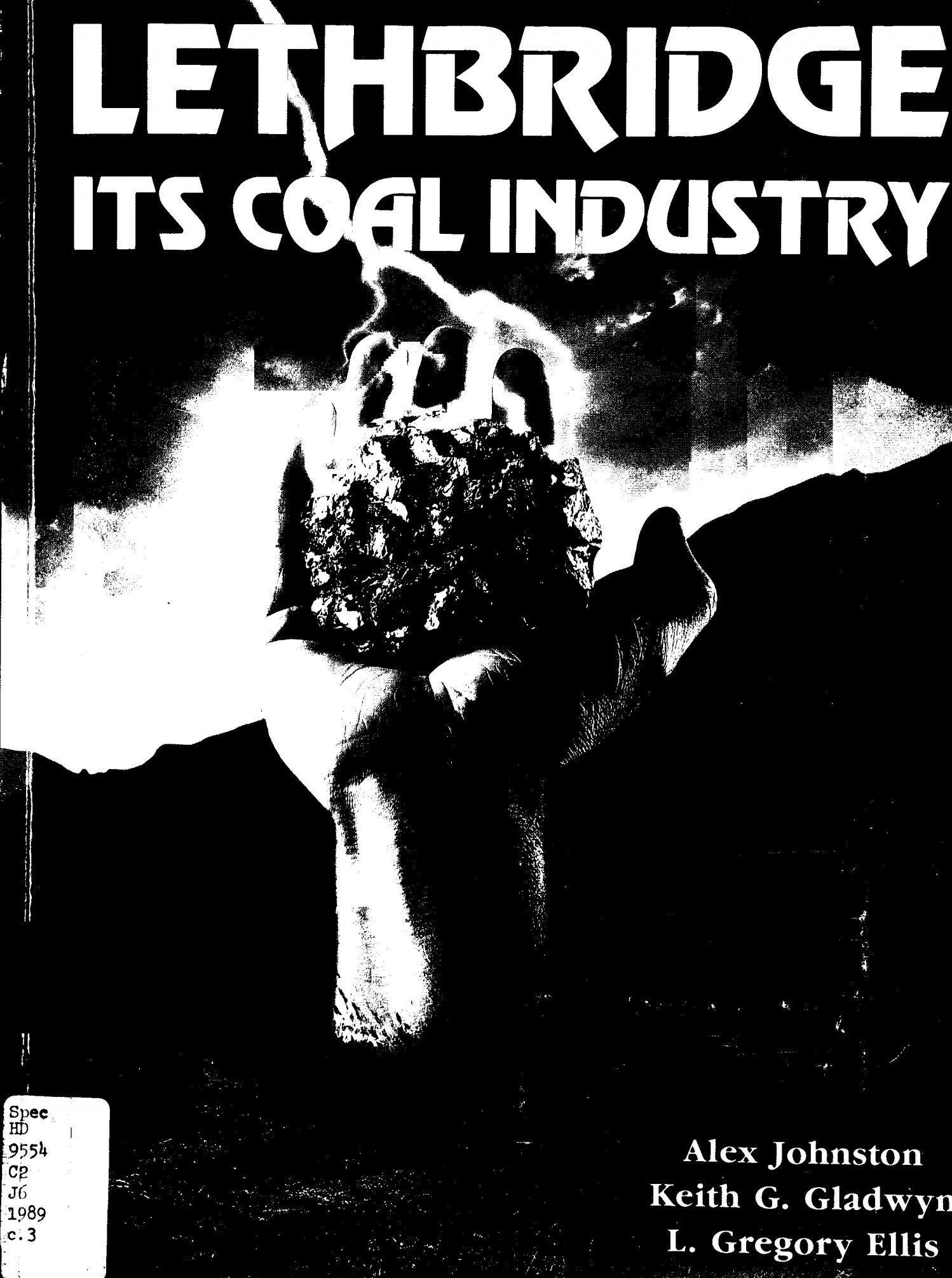


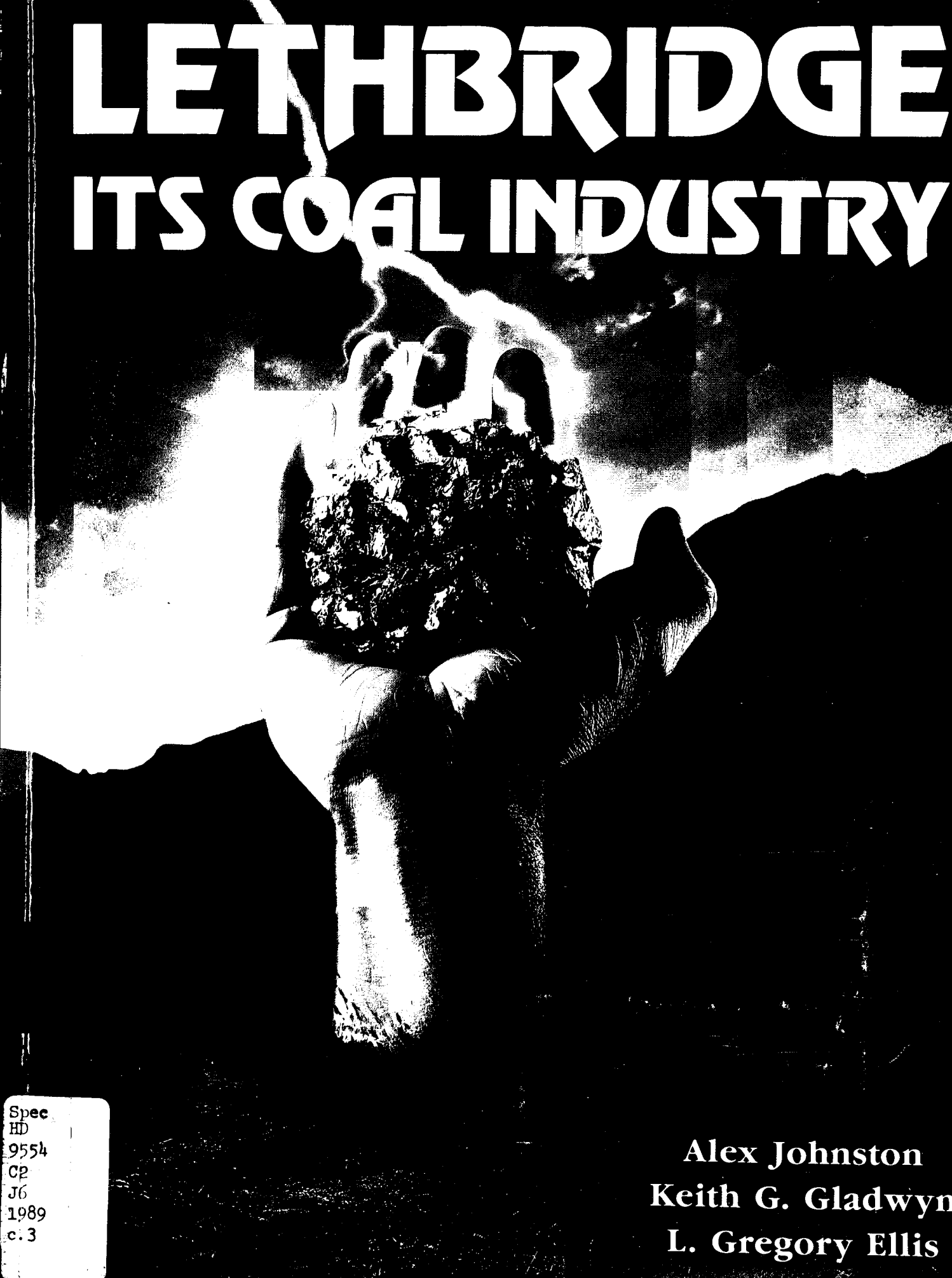
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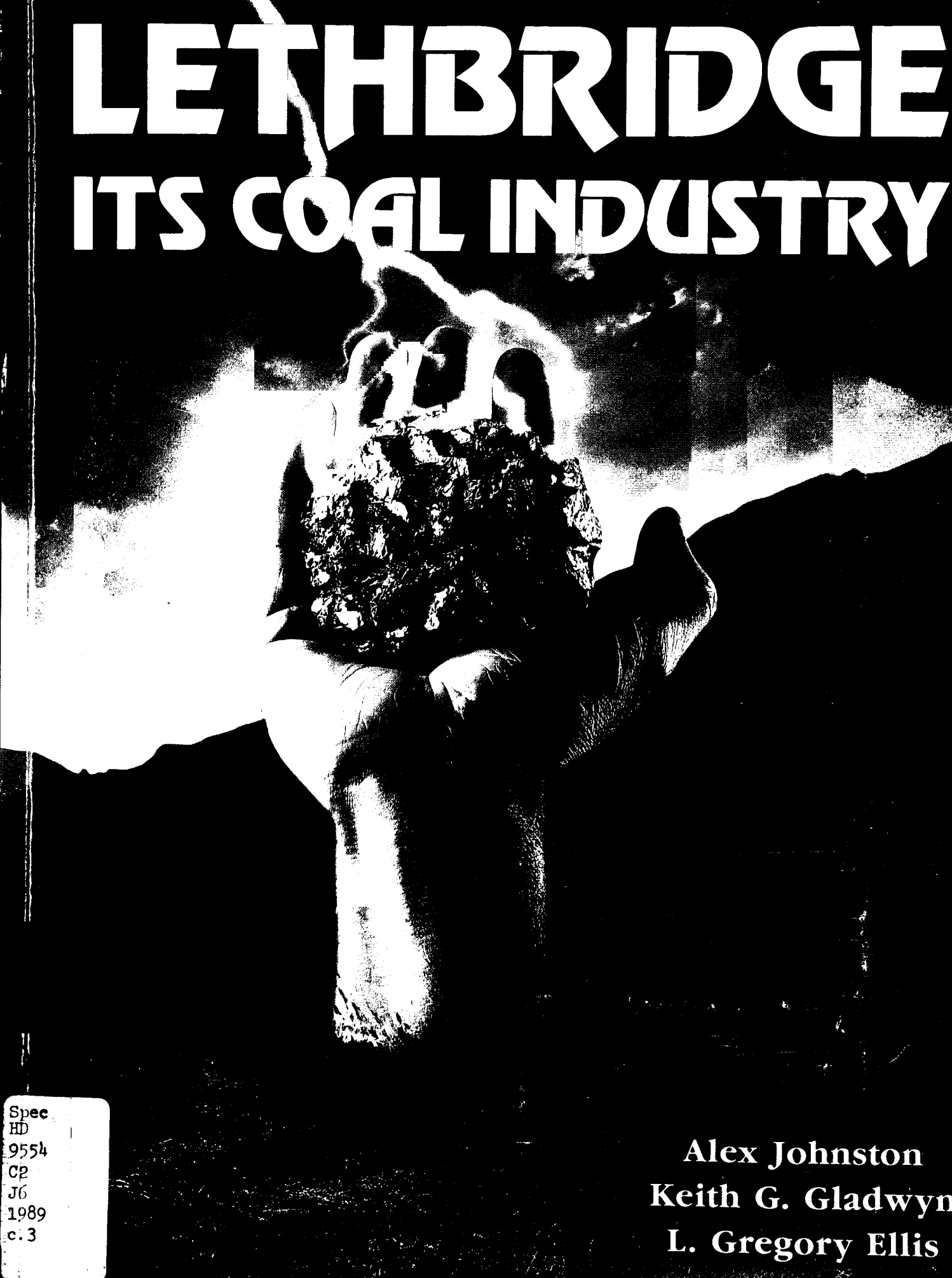
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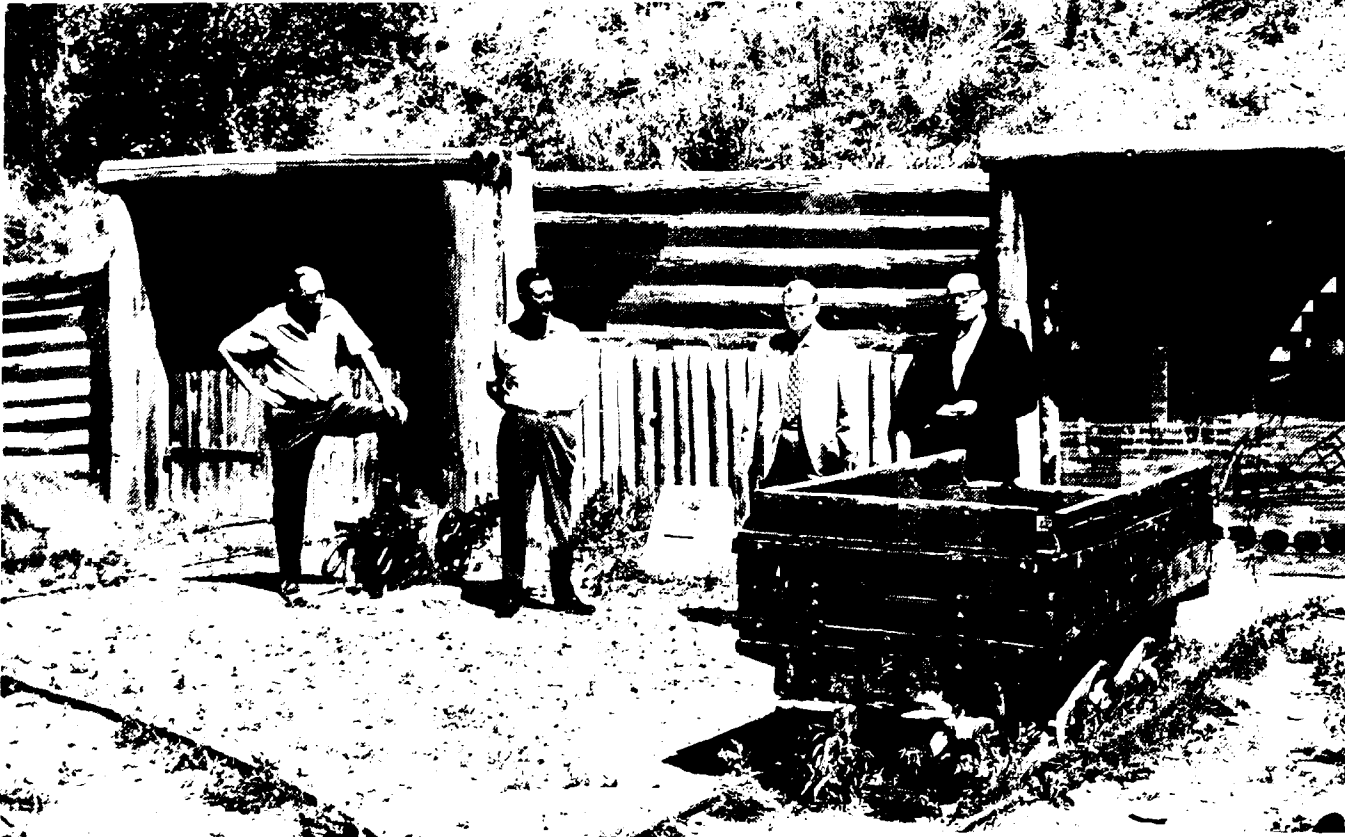
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Top, from L-R: No's 2 and 1 drift mine entrances in 1888. These drift mines were the first to be opened by the North Western Coal & Navigation Company, Limited of Sir Alexander Tilloch Galt. Selection of the site was made by William Stafford, Senior, Mines Superintendent with the Galt company. The decision dictated the location of the Town and the later City of Lethbridge. It was on 13 October 1882 that Stafford and a crew of 15 Nova Scotia miners began to drive these entries. By December coal was being taken from the mine and was being picked up by North-West Mounted Police work parties with wagons for use at Fort Macleod. Bottom, from L-R: Simulated mine entrances to No's 2 and 1 drifts, constructed in 1967 as a centennial project by the Gyro Club of Lethbridge.

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Blackfoot warrior Iron Shirt has painted his face with a mixture of coal dust and oil in this 1833 engraving.

Black-Faced Warriors

"In the afternoon [of 14 February 1793] arrived at our Tents about 17 Blood Indian Young Men, who have been on a friendly visit to the Snake Indians. The Snake Indians & their neighbors the Crow Mountain Indians being at present at an inveterate war with each other, the former induced the 17 Blood Indian men to accompany them to war against the Crow Mountain Indians, on account of their all having guns. They found 35 men of that tribe & melancholy to relate only 3 escaped to relate the horrid catastrophe to their countrymen. The Spoils they took from the Slain was 2 guns (Spanish), 20 swords, several Shields, Bows, Arrows, Clothing, &c, &c, & every man they scalped according to their wonted custom, 4 of which trophies of war was given amongst these 17 Blood Indian young men as a sufficient recompense for their assisting in the above horrid affair, tho it is natural to think that these young men by having all fire arms was the principal cause of their killing such a number & so very few escaping. Had these men not assisted, the opposite sides would have been armed exactly alike & the event would probably not been so melancholy before either one side or the other ran for it. No Quarter is given by any Indian at War. These men arrived with their faces all black with coal their usual custom when they return from War at any Peoples Tents they find on their return. They also continue in this manner with black faces a few days after they arrive at their own Tents, Singing, Dancing & Drumming the greater part of the Time at short intervals. This was now the case here & our Indians joined the chorus & carried the scalps upon a stick in the manner of a flagg & kept dancing & singing all the while."

From: Journal of a Journey Over Land from Buckingham House to the Rocky Mountains in 1792 & 3. By Peter Fidler

and J. J. Hamilton Coal Company Ltd., 1935-1941. [The mine came to Lethbridge Collieries as part of the 1935 amalgamation and was leased to the J. J. Hamilton Coal Company as soon as possible.] Hamilton closed the by-now worked-out mine on 15 September 1941, moving his equipment to a new mine on the west side of the Oldman River about 4.8 km southwest of Diamond City. Total recorded production was 481 975 tonnes of coal.

In 1885 Dr. Dawson submitted a Geological Survey "Report of Progress 1882-1883-1884" on, among other places, the region drained by the Bow and Belly Rivers. The district was the first to be chosen for detailed geological examination because of the known and reported value of its coal deposits and because of its location in relation to the recently-adopted transcontinental railway route. The first geological notes on the district had been recorded in 1859 by Dr. James Hector while a member of the Palliser Expedition. Additional investigations were made by Dawson himself in 1874-1875 while employed as geologist-botanist to Her Majesty's North American Boundary Commission. Professor John Macoun, later Dominion Botanist, had noted seams of coal at Blackfoot Crossing in 1879. The summer of 1881 was spent by Dawson and Robert G. McConnell in the Bow and Belly River district. McConnell, having wintered in Calgary, continued the geological exploration independently in 1882. In 1883 Dawson devoted the month of June to a further examination of a number of localities in the southern part of the region where doubts as to geological structure still remained.

In his 1881 survey of southern Alberta Dr. Dawson described 46 locations where coal occurred. Only five of these locations were thought by him to have superior commercial possibilities: Blackfoot Crossing [in Blackfoot, *Soyogh Pawagnkway* or "Ridge below the water"], Grassy Island and Horseshoe Bend on the Bow River; the Coal Banks [in Blackfoot, *Sik-oob-kotoks*, or "Black/Rocks"] on the Belly River; and Medicine Hat [in Blackfoot, *Sab-a-mis*, "Hat or Head-dress"] on the South Saskatchewan. Dawson's report on the 1881 survey, McConnell's 1882 field studies, and Dawson's own follow-up studies in 1883 were not published until the 1885 Report of Progress although a preliminary report on the Belly River Coal District was published in 1883.

Elliott Torrance Galt, then Assistant Indian Commissioner, had seen some of these coal exposures in 1879, notably the one at The Coal Banks where a 1.5-m thick seam was exploited by Nicholas Sheran as early as 1874. Innocuous as this event seemed to be at the time, it was soon to focus the attention not only of the Dominion government but also the interest of English financiers on this isolated enterprise. When the directors of the Canadian Pacific Railway in 1881 decided to build their transcontinental line across the southern plains, Elliott and his father, Sir Alexander Tilloch Galt became very interested in western development, particularly in coal mining. By April 1882 Sir Alexander had organized the North Western Coal & Navigation Company, Limited, capitalized in London for 50,000 pounds sterling.

In 1864 John A. Macdonald, George-Etienne Cartier, and Alexander Galt dominated the Liberal-Conservative administration in Ottawa and became important figures in the Great Coalition, which effected Confederation three

years later. All were friendly to the struggling, under-financed Geological Survey of Canada, which had been established by William Edmond Logan in 1842. As Finance Minister, Galt introduced a new Geological Survey Act and arranged adequate funding by five-year periods. The new act declared the Survey to be permanent thus ending its heretofore ad hoc, temporary character and its precarious existence. Its officials were grateful and were soon called upon unofficially to repay Galt for his support. The *quid pro quo* took the form of advance information as to the location and extent of the coal resources of the West.

Galt was appointed Canada's first high commissioner to Britain in 1880 with instructions to make the development of the North-West Territories his top priority. As it turned out, his own business interests, and those of his son Elliott, pointed him in the same direction.

There seems little doubt that Elliott and Sir Alexander Galt received copies of Dawson's 1881 Geological Survey notes even before the field season ended and that they were probably briefed by Dawson himself. By fall 1881, the Galts had sent Captain Nicholas Bryant, a Cornish mining engineer with the Acadia Iron Mines, Nova Scotia, to the West. His assignment was to investigate the commercial possibilities of the coal deposits at Blackfoot Crossing, Grassy Island, Horseshoe Bend, the Coal Banks and Medicine Hat. Bryant was joined during the 1882 field season by William Stafford, a Scottish coal mines superintendent from Westville, Nova Scotia. By 13 October 1882 Sir Alexander Galt's newly-organized North Western Coal and Navigation Company, Limited, had decided to open drift mines at the Coal Banks where the best quality coal was located. By December coal was being taken from the mines.

Dawson had said of the Coal Banks seam, "The gentle inclination shows that the coal might be reached at a moderate depth by shafts sunk through the dark shales of this part of the valley, from which it might with facility be worked up its slope to the eastward." This comment likely played a major role in William Stafford's decision to open drift mines on the east side of the Belly River, a decision that gave rise to the hamlet of Coalbanks and dictated the future location of the City of Lethbridge.

Galt returned to Canada in 1883 to devote the last ten years of his life to his western business interests, the day-to-day operations of which were under the general management of Elliott Galt.

The Medicine Hat seam also was exploited long before Dawson's published report appeared. A Winnipeg company, called the Saskatchewan Coal Mining and Transportation Company, under J. E. Woodworth, MPP, Brandon, Manitoba, was organized to compete directly with the Galts. The mine was located on the South Saskatchewan River near the modern town of Redcliff. It was a large operation whereby a slope was constructed from the prairie level to the horizon of the seam and adits run in on the coal; there were three such adits by August 1883. The screens and houses of the mine were situated at the head of the slope and a branch line was constructed to connect the mine with the Canadian Pacific Railway. The worked seam was from 1.4 to 1.6 m in thickness. By 26 September coal was being shipped to Calgary and, about ten days from that date, Woodworth expected to be in a position to deliver 454 tonnes per day from his mine. For-

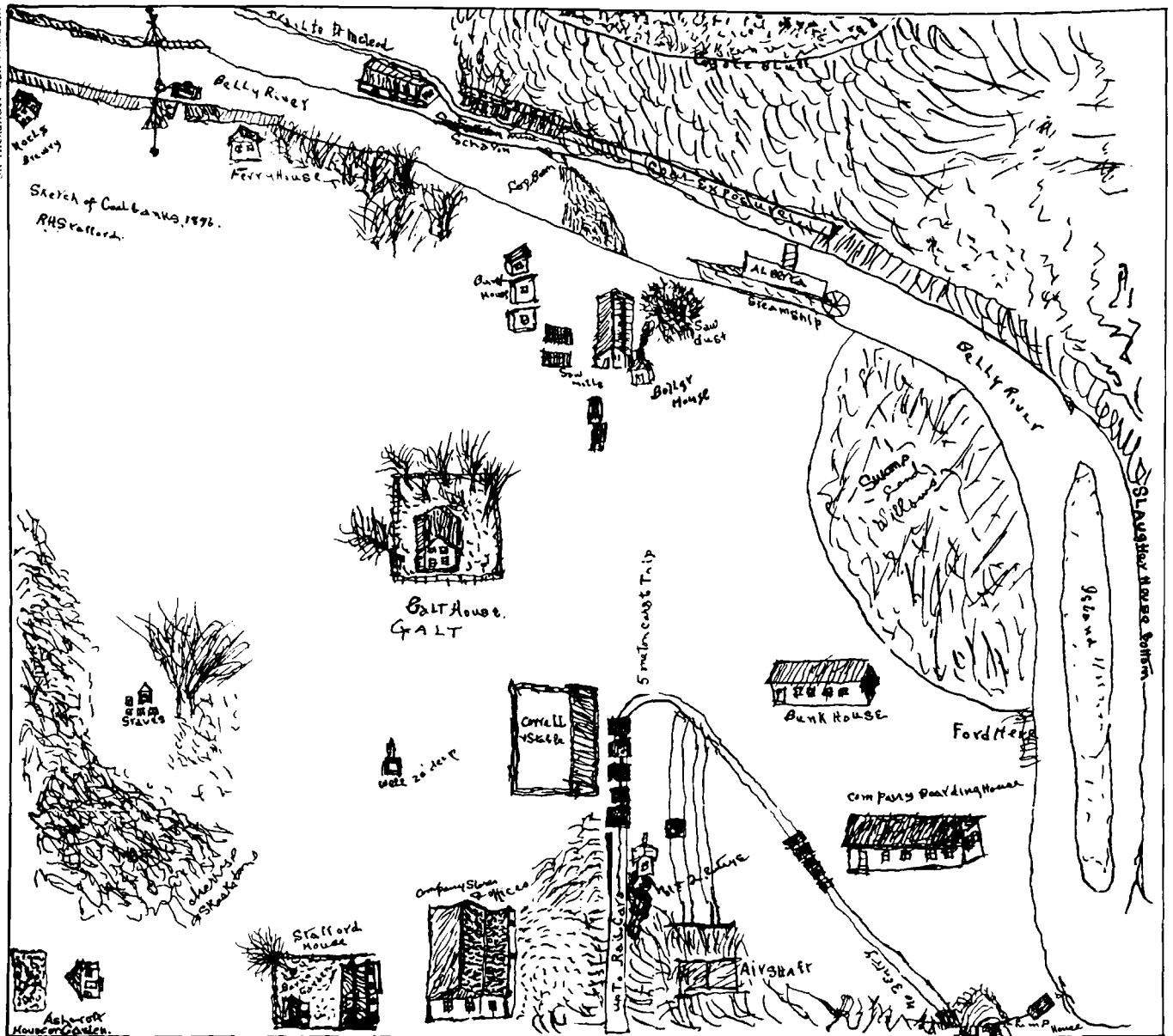
First Record of Coal in Alberta

On his return trip to Buckingham House, after having visited the Livingstone Gap/Highwood River area with a Peigan band, Peter Fidler, a Hudson's Bay Company surveyor, reached Kneebills Creek [called by him Coal creek] between modern Carbon and Drumbeller on 12 February 1793 and recorded the first discovery of coal on the Canadian prairies.

"Where we put up the northern bank of this creek is steep & clayesh white earth along which there are two stratas of coal in a horizontal position, one of them being 28 feet below the level of the surface & the lower strata 34 feet. The former strata is about 60 yards long & the lower one 100 yards, each strata about 15 inches thick. This is the only coal I have ever seen in the earth in this manner in this Country. I brought some of this & put it on the Tent fire, which burnt very well without any crackling noise. It is of unctious soft nature & something like marle. The [Peigan] Chief [with whom Fidler lived and travelled] being absent at the time in another Tent, & he having a particular aversion to coal being burnt in his Tent, when he came home, just as he was stepping into his Tent his woman told him what a henious offence I had been doing by putting coal on the fire. He immediately returned without entering his own tent & remained out in another all night, very much affronted."

On 14 February 1793, Fidler and his party reached the bank of the Red Deer River, which he said was very steep and bad. He followed down Kneebills Creek, which he thought would be easier than going down the bank but it turned out to be much worse.

"At the Junction of the Creek with the river, the Banks of the creek was nearly perpendicular on the sides, composed first of a loose sandy earth of several feet thick, then a strata of solid rock from 6 to 8 yards thick, then a loose sandy earth below the rocks from 90 to 100 yards deep which is upon a level with the river. I computed the height of the bank above the level of the river to be about 500 feet. Where the creek joins the river, a large bed of excellent large Coal, about 4-1/2 feet thick, but how much lower I could not determine by reason of the earth being fallen down & covered it up. Some coals was fallen down of above 36 inches square in one solid block. This is of a more hard nature than what I saw before on this creek. Several of these large blocks was laying just level with the river in the Mouth of the Creek. The upper surface of this thick strata of Coal lay in a horizontal direction." From: *Journal of a Journey Over Land from Buckingham House to the Rocky Mountains in 1792 & 3. By Peter Fidler*



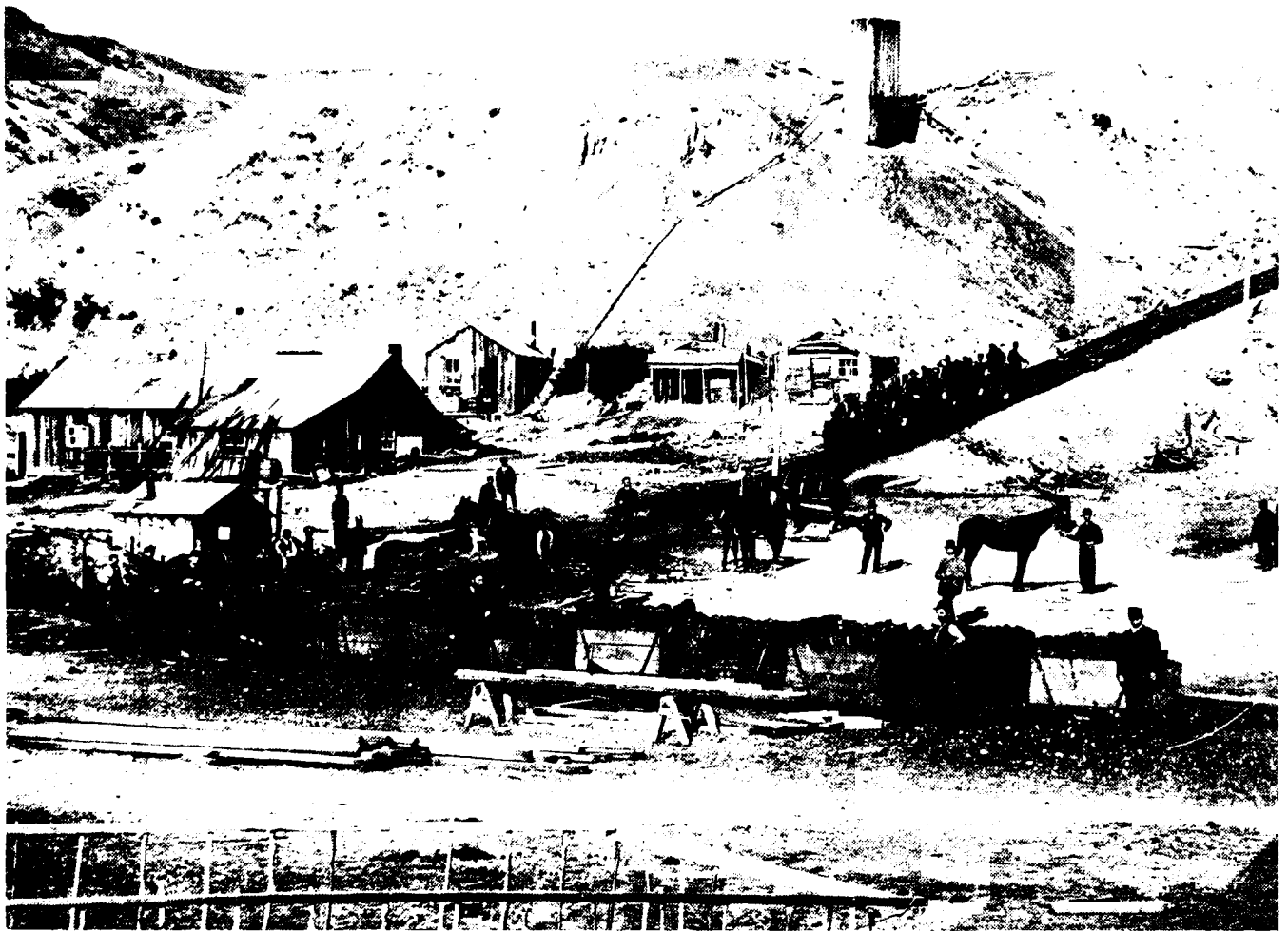
Unfortunately for the Galt enterprises, Woodworth's coal was of much poorer quality than Galt coal and this eventually proved to be his company's undoing. Closed by about 1885, the mine was later sold to the Medicine Hat Railway and Coal Company. It reopened about 1889 and operated until 1891. The Galts continued to operate in southern Alberta for 30 years, from 1882 to 1912, then sold out to the CPR.

Galt's immediate problem at Lethbridge (or Coalbanks as it was then called) was to get his coal to market. The CPR had signed a contract to buy coal at a good price in order to encourage the enterprise and to guarantee a future supply. River steamers and a fleet of barges were built but only 180 tonnes of coal were conveyed to Medicine Hat in 1883 and 2729 tonnes in 1884. In 1884 the Galt company applied for a charter to build a narrow gauge railway line, which was constructed in 1885, from Dunmore on the CPR main line near Medicine Hat to the Belly River mines. A narrow gauge line to Great Falls, Montana,

followed in 1890. By 1893 the Galts supplied coal for 3220 km of railway line and for the settlers along the routes. In partial payment for its railway building activities, the Galt company was given land grants of 959 ha/km at a cost for the initial survey of 25 cents/ha. Eventually 514 726 ha were obtained in this way and were consolidated into a large block south and east of Lethbridge.

There was much interest in Sir Alexander Galt's early mining operation, particularly among Winnipeg reporters.

In lengthy articles they noted that coal was first dug in what became the Lethbridge district in 1874 on the west bank of the Belly River and at Fort Whoop-Up on the St. Mary River a few km further south. Work began at the Lethbridge colliery on 13 October 1882 when 15 Nova Scotia miners under William Stafford ran in two drifts at the level of the floodplain on the east side of the river. The system of drift working was continued and by 1893 there were nine openings, of which four had been worked out



A map of Coalbanks (opposite) drawn by Richard Hill Stafford in 1896. Eight-year old Richard Stafford came west with his parents in 1883 and lived in the Stafford home near the drift mine entrances until moving a kilometer north to the Stafford ranch house in 1893. His 17-year old brother, Henry Stafford, was buried in one of the "Graves." Stafford went to the Klondike in 1897 and remained there for several years. The transfer area at the bottom of the Incline (above) would have been a familiar sight to young Stafford. The four-inch [10 cm] pipe lying on the coulee slope carried compressed air.

and five were in operation. Car tracks led to the foot of an inclined railway (The Incline), up which cars were drawn by a wire cable for 760 m, rising 91 m in that distance, to the Bankhead. The drift mines, because of the ventilation technology of the 1880s and 1890s, were only able to penetrate about 305 m eastward into the seam. That point had been reached by about 1887.

In 1888, so as to provide for increased output, a shaft, known as Galt No. 1 Shaft, was sunk about 1.0 km east of the river to a depth of 90 m, where the coal seam was reached. The output from this shaft was 545 tonnes per day. Shaft No. 2 was 1.2 km northeast of Shaft No. 1. It was sunk in 1889 and coal was being taken out by the end of the year. It later became a downcast or ventilation shaft. Shaft No. 3 was 1.0 km north of Shaft No. 2 and 1.6 km north of Lethbridge station. Another shaft, No. 4, was sunk 2.4 km north of the station. All these shafts were 2.4 x 4.7 m in size.

The system of mining from the floodplain by drifting

was to drive two passages or galleries, called entries, 6.0 m apart straight into the coal seam for about 244 m. One was an inlet for ventilation and also a passage by which the miners entered and through which horses hauled out cars of coal. The other was an outlet for ventilation. At the end of the outlet passage, nearest the bank, an air shaft was sunk, at the bottom of which a large fire was kept burning for the purpose of heating or "rarifying" the air. The faster hot air rushed up the shaft, the more cold air entered by the inlet for ventilation.

At right angles to the two main entries, at intervals of 10 m, a chamber was started off, narrow at first until it got a short distance from the entry, then widened out to 5.5 m. The miners dug the coal in these chambers, shovelled it into cars and pushed the cars on temporary tracks to the main entry, from whence they were taken out by horses to the bottom of the Incline. Galleries and chambers were timbered throughout as there was no hard rock. The system used was known as the room and pillar or chamber

The Lethbridge Coal Zone

The Belly River Group, known as the Judith River Formation in Montana, is the name given to a sequence of rock strata comprised of the Foremost and Oldman Formations; the Oldman being the younger of the two. The sequence ranges in thickness from 425 m in the Lethbridge area to 580 m around Turner Valley. Both formations contain coal beds which have proved to be of great economic value.

The McKay Coal Zone forms the base of the Foremost Formation separating it from the underlying Pakowki Shales. The Foremost Formation is probably predominately composed of sandstones although shales are also abundant. At the top of the formation lies the Taber Coal Zone which serves to separate the Foremost Formation from the overlying Oldman Formation. The Taber area coal mines exploited this horizon.

The term, Oldman Formation, was coined in 1940, the rocks of this formation having been referred to as the Pale Beds prior to that. The formation is composed of light-colored sandstones and shales. Coal seams occur only at the top of the formation although some soft, thin, very impure carbonaceous beds do occur lower down. The coal zone is underlain by a series of fine-grained interbedded sandstone and bentonite layers while the zone is capped by 10 to 20 m of shale. The name

given to this coal zone is the Lethbridge Coal Zone.

The Lethbridge Coal Zone is present throughout much of southern Alberta, but in the northern and central portions of the province it is overlain by younger and thicker coal zones. It only has mineable potential in the areas around Gleichen-Bassano, the Bow City area (where Alberta's newest mine is located), and in the vicinity of Lethbridge.

The Lethbridge Coal Zone is the thinnest of the three Belly River coal zones containing up to 45 m of strata in areas of maximum deposition but averaging only 10 to 18 m over its areal extent. The zone contains up to seven individual seams; most are thin and lack in lateral persistence. The rapid emergence and disappearance of individual seams has resulted in a pod-like deposition of coal giving rise to tremendous variations in seam thickness over relatively short distances. The majority of seams in the zone range from 20 cm to 1.5 m but rarely does any locale contain two thick seams. Even the Lethbridge area with its rich history of coal mining only has one seam that exceeds 1.5 m in thickness but it is the thickest individual seam in the zone reaching thicknesses of over 3.0 m around Kipp. This seam is known as the Galt Seam and has supplied nearly all of the coal mined in the Lethbridge Coal District. Where the Galt Seam was mined it ranged in thickness from 0.6 m to 2.75 m but most mines exploited a seam of about 1.5 m in total thickness, usually with some form of parting.

Coal Mining

The coal reserves of the Lethbridge district have been exploited almost entirely by underground mining. Only half a dozen small strip operations are known to us. In underground mining, access to the seam to be removed is gained in one of two ways. If the mine is in an area with hillsides and river valleys, an adit can be made into the hillside or river bank and a slope or drift can be driven through to the coal seam where mining is to begin. The second form of access is by means of a shaft, used where the terrain is flat. A vertical shaft is dug down to the level of the coal, an elevator or cage is installed to transport miners and equipment to the seam and to bring the mined coal to the surface.

At Lethbridge, once access to the seam was attained, the coal was removed by the room and pillar method, also known as bord or simply pillar mining. In room and pillar mining, entries are driven straight through the section of the seam to be mined. Other entries are driven at right angles to the first, leaving a series of pillars to hold up the roof and prevent it from caving in. The areas from which the coal was removed were known as rooms and the columns of coal left were known as pillars. The mine soon became a honeycomb of rooms and pillars bisected here and there by long haulage tunnels. When the farthest extent of mining was reached, miners robbed the coal from the pillars as they retreated back toward the entrance. This allowed removal of maximum tonnage of coal from each

mine. It also allowed the mine to cave in behind the mining and the normal process of ground subsidence to begin.

Coal Mine Inspectors and the Mine Number System

Until September 1905, what is now the Province of Alberta was part of the North-West Territories. When it became a province, Alberta became responsible for the management and administration of the natural resources within its boundaries. [Natural resources were not given to the province by the federal government until 1930.] The Mines Inspectors Branch of the Department of Public Works was formed to carry out part of this responsibility. One of its first tasks was to evaluate and organize the coal industry.

All coal mines then producing plus some previously abandoned mines were given mine numbers. Numbers were used to identify the mines and allowed inspectors to organize their files to keep track of each mine. The designation, Mine No. 1, was assigned to Bankhead, Mine No. 2 to Canmore Mines, and Mine No. 3 (or Mine No. 0003, as we have written it in this publication) went to the Galt mines at Lethbridge.

It must be realized that the designation, Mine No. 3, was assigned to all of the Galt drift mines, nine in number, and to several already abandoned as well as active shaft mines: Galt No. 1 (abandoned 1897), Galt No. 2 (abandoned 1897), Galt No. 3 (active), and Galt No. 4 (active). Later Galt

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Sir Alexander Galt Dies

Montreal, September 19 [1893].--Sir Alexander Tilloch Galt, G.C.M.G., D.C.L., died at 3:30 this morning. The deceased gentleman was one of the most prominent men in Canadian politics prior to, and for some time after, confederation, and was the first occupant of the position of High Commissioner for Canada in England, the position now filled by Sir Charles Tupper.

Sir Alexander Tilloch Galt, son of John Galt, the author, by Elizabeth, daughter of Dr. Tilloch, was born at Chelsea, September 6, 1817, and educated in England and Canada. He was in the service of the British and American Land Company from 1833 to 1856, and commissioner and manager of their entire estates from 1844 to 1856. He was first elected to the Canadian parliament in 1849. The governor general, Sir E. W. Head, requested him to form an administration in August 1856. This task he declined, though he joined Mr. Cartier's administration as finance minister, and held that office until the ministry was defeated on the Militia bill in May 1862. Sir Alexander resumed his post as finance minister in March 1864, and retired in August 1866, when the cabinet failed to carry a measure securing educational privileges to the Protestant minority in Lower Canada, in view of the greatly increased powers obtained by the French and Roman Catholic majority under confederation. Mr. Galt felt that, as the representative of the Protestants of Lower Canada, he could best serve their interests by retiring. The results appear to have justified his views. He was appointed a delegate for Lower Canada, to confer with

the Imperial government on the subject of confederation, and in that capacity, although not a member of the Canadian government, he secured protection for his co-religionists. On the confederation being affected he was appointed minister of finance in the new Dominion government, and held that office from July 1 till November 4, 1867, when for private reasons he resigned.

Sir Alexander was regarded as the ablest financier in the colonies, and had taken a prominent part in all measures adopted to unite and consolidate British America. He was created a knight commander of the order of St. Michael and St. George in 1869, for his long official colonial service. In July 1875 he was appointed a commissioner on behalf of Great Britain, under treaty of Washington, May 1871, and more recently he acted as a member of the Halifax fisheries commission. He was nominated a GCMG, May 25, 1878. Sir Alexander was appointed high commissioner for Canada, in England, in 1880, and was delegate for Canada at the International Monetary Conference in Paris in 1881. He was a member of the executive and general committees of the great International Fisheries exhibition in 1883. In 1883 he resigned his high commissionship and returned to Canada.

In 1882 he established the North Western Coal and Navigation Company, Limited, which opened at Lethbridge the first coal mines in the North-West Territories as a commercial enterprise; and in 1885 constructed 109 miles (175 km) of railway, connecting the mine with the CPR.

The Lethbridge News 21 September 1893

working. [Cost of timber props to support the roof was an expensive item, averaging about ten cents per tonne of coal produced. Thus, in June 1882, the Galts established a sawmill about 48 km northwest of Fort Macleod in the Porcupine Hills to produce mine props and milled lumber.]

The cars of coal hauled to the top of the Incline were taken to the Bankhead, where they were tipped over screens, the various classes of lump, nut and screenings being sorted out and landed in three separate cars standing on parallel tracks under the screens. The Incline had a double track, and on each trip a rake of five cars holding about a tonne of coal each was taken up, a rake of five empties being sent down at the same time. A trip was made in three minutes. At the Bankhead a colliery car of coal was dumped over the screens every 45 seconds during working hours. Mining from the shafts was the same as from the drifts except that entries were started from the bottom of the shaft instead of from the river bank. As the loaded colliery cars came back to the bottom of the shaft they were pushed one at a time on to an elevator platform and were carried to the top of the shaft, 91 m, in 20 seconds.

A large quantity of machinery was used in connection with the colliery, including several 60 and 100 HP steam engines with boilers, hoisting drums, and cages. A smaller engine was used to pump water out of the shafts. Legg mining machinery was used to undercut the face, after

which miners shot down the coal with black powder and loaded it on to mine cars. Legg cutting machines operated on compressed air brought in from a compressor at the head of the Incline.

It is not generally known that the Galt company set up the town's first waterworks system in 1883. It was designed to wash coal from the drift mines but, in 1885, a pipeline was run up the coulee hill to a water tank at the roundhouse. The line was then extended to a hydrant at the corner of 1st St and 1st Ave S. Horse-drawn 2275-L water tanks loaded up here and their drivers filled barrels at all homes and businesses. Also nine underground 68.2-m³ water reservoirs were built in the downtown area for fire fighting purposes. The company water line eventually was extended to Galt No. 3 Mine. It was replaced by the modern civic waterworks, opened on 1 January 1905.

The company produced 20 865 tonnes of coal in 1885, its first year of operation with a transport system in place. In 1893, output was 726 tonnes a day or 145 149 tonnes for the season, for all of which there was ready sale. The Galt seam being worked at Lethbridge contained 20 180 tonnes of coal under each hectare. About half could be extracted, the rest was left as supports for the main galleries and as waste. About 101 ha had been worked out by 1893.

The year 1893 was a significant one at Lethbridge. It was the best year so far for the company even though from 1888 to 1896 the Canadian economy was depressed and there were few markets for coal. But after 1893 total tonnage and sales of coal from the Lethbridge mines fell off and did not recover until 1898 when output reached 152 643 tonnes, increasing to 218 193 tonnes in 1905. The Incline shut down on 15 May 1893 and signalled the end of the riverbottom drift mines. Seventy-five persons, including 50 miners, were affected although all but about 15 were absorbed elsewhere in the Galt organization. Finally, Sir Alexander Galt died on 21 September 1893. The *Lethbridge News* said, "Sir Alexander Galt deserved well from the people of Canada as a whole, but there are some parts of it which have particularly benefited by his abilities. Among these was the Town of Lethbridge, which owes its very existence to the dead statesman. That large deposits of coal existed in this district was well known to many before Sir Alexander Galt undertook the task of forming a strong company to develop and work the mines. It was no easy task to induce a large amount of English capital to be ventured in such an undertaking. But Sir Alexander Galt had peculiar advantages. His residence and financial dealings on behalf of the Canadian government in London had placed him in touch with the great English capitalists by whom his financial ability was fully recognized."

Galt No. 1 shaft closed on 5 March 1897. As a result

a large number of miners, principally recently-employed Hungarians, left for the Kootenay country and new opportunities there.

The abandonment of the riverbottom drift mines in 1893 implied a new devotion of the Galt companies towards large-scale exploitation of the coal resources at Lethbridge. But worldwide depression and coal markets that never quite lived up to expectations plagued the operation. Colonization was proceeding, albeit slowly, and the CPR, as the only major commercial market in the region, essentially dictated what the Galt mines would produce and how much they would receive for their product.

All of this changed around the turn of the century. The worldwide depression ended, in part because of massive gold discoveries in South Africa and the Klondike. Settlement of the western prairies finally got underway accompanied by a booster mentality that thought anything was possible. Locally, the Galt company's new 48 600-ha irrigation project was the first area to be settled and farmed. By 1905 dry farming techniques had become widely known and settlement of the dryland--the so-called Winter Wheat Lands--was well underway. Railway lines were laid into the newly-settled lands and many small towns developed. The coal mines of the Lethbridge area began to proliferate, as will be shown on the following pages.

But first we will discuss briefly the 20th century rise and fall of Lethbridge's coal industry.

Lethbridge Colliery, Alberta, N.W.T. 1885 And Previous Years

In the Lethbridge colliery there are two seams of coal separated by a thin layer (about one inch) of slate.

These seams are undulating and very regular, their combined thickness being about five feet two inches.

The system of working is that of laying off "rooms" at right angles to the double "entries" (each being nine feet wide) which are driven "over the butt" of the coal.

The "rooms" are run nine feet wide a distance of 15 feet back from the "entries" when they are then widened out to 20 feet. By this means all the coal is extracted, leaving pillars 15 x 24 feet along the sides of the "entries" to support the roof.

The company has introduced six American coal mining machines and two air drills; these machines greatly facilitate the mining and enable the company at any time to greatly increase their output, should the demand require it.

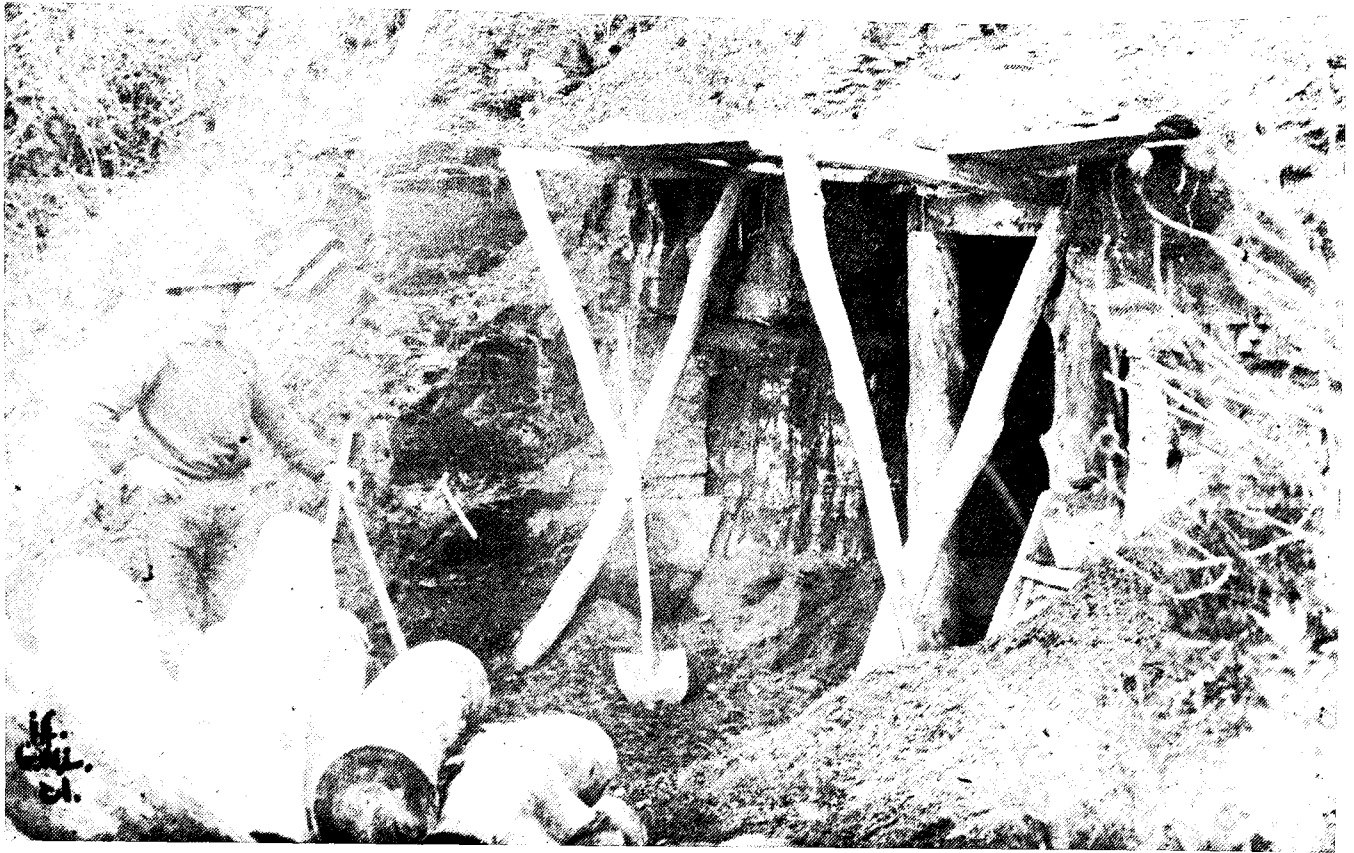
The power employed to work the machines is

compressed air manufactured by a Norwalk compressor 20-inch cylinder with 24-inch stroke and weighs about 15 tons. In connection with this compressor, there are three reservoirs for storing the air, about 5,000 feet of five-inch main pipe and about 5,000 feet of one-and-a-half-inch pipe for the purpose of conveying the air to the various workings of the mine. The compressor is situated in the same building with a 60 H. P. hoisting engine, which hauls the trucks out of the valley, 2,200 feet up an inclined railway on to the "Bankhead", where the coal is dumped into chutes and discharged into the railway cars, which stand on scales below. Compressed air is also utilized for pumping water out of the mines, running the emery wheel for sharpening tools and [running] the forge in the blacksmith's shop. Three large tubular boilers are employed for making steam for the hoisting engine and compressor.

Total expenditures during the year [1885] on Capital Account amounts to \$38,283.00 while Working Expenditure was \$177,480.00.

Total expenditure up to 31st December 1885 [presumably from April 1882] on Capital Account amounts to \$175,180.52 while the Working Expenditure up to the same date amounts to \$201,323.85.

C. A. Magrath
Lethbridge, Alberta



The beginning and the end of coal mining in the Lethbridge district. Top: Nicholas Sberan grubbed coal briefly near Fort Whoop-Up from June to October 1874, then quarried and mined the seam at The Coal Banks from November 1874 until his death by drowning in May 1882. The coal mine he started continued to operate until September 1941. Bottom: In January 1965 miners at Shaughnessy (Mine No. 1263) were called out on strike by the union in a dispute over wages. The strike proved to be the final act in the 90-year old history of the Lethbridge field as it forced the last by-then marginal mining operation to close. Only sporadic small-scale coal mining took place after that time and even it ended in 1969.

Rise and Fall of the Coal Industry at Lethbridge

Resource industries are notoriously sensitive to market forces and the coal mines of the Lethbridge region were no exception. The primary Lethbridge market was always for domestic coal although it was used in CPR locomotives when the mines were first opened. Unlike steam coal, where users tended to be a few railways and industries with a constant demand, users of domestic coal consisted of thousands of householders drawing a heavy supply in winter for heating and cooking but a very limited supply in summer for cooking purposes only. Further, the domestic coal fields were tied to the agricultural economy of the prairies so that demand varied with crop conditions. Variable winter weather strongly influenced demand. The coal could not be stored in the open so mines had to operate on the basis of producing only sufficient coal to fill current orders.

This led to great fluctuations in demand with full employment for a few months followed by lengthy layoffs. When generally difficult labor relations, particularly in the early years, were added to strongly seasonal demand and a volatile market the potential for trouble was always present. Strikes became a frequent event, instigated by whichever side was in a position temporarily to exert economic pressure on the other.

[It should be pointed out that this referred mostly to the early years from about 1905 to 1930. Local miners were members of the United Mine Workers of America, the most powerful union in North America for decades. It was not until the 1930s that industry in general began to confront such union strength in, for example, the American Federation of Labor and the Congress of Industrial Organizations or AFL/CIO, and not until the 1950s that government began to do so in, for example, the small but militant Canadian Union of Postal Employees or CUPW. Thus, many people failed to understand the difficulties faced by early mine owners in negotiating wage-benefit contracts with a monolithic union such as the UMW. Strikes became less frequent as both parties learned from their mistakes and, eventually, long periods of relative labor peace began to characterize the industry.]

One of the most celebrated of these strikes was the miners' strike of 1906. Rising prices, a natural outgrowth of an overheated economy, caused considerable discontent among a large majority of Lethbridge's workers. In February, believing that their wages were not keeping pace with inflation, miners from the Galt and Ashcroft collieries sought to increase their earnings and decrease their working hours by forming Local 574 in District 18 of the United Mine Workers of America. Only a month later they presented the Alberta Railway & Irrigation Company with a list of demands. The company, under managing director Sir Augustus M. Nanton, rejected the demands out of hand and on 9 March 1906 the union called a strike. Initially the strike was peaceful but when the company hired 100 men to keep the mine open and several private detectives to spy on the strikers, the situation turned ugly. Several times during the summer angry miners and their wives attacked policemen protecting the strikebreakers; on two occasions explosives damaged the homes of employed workers.

By the end of the summer the strike had reached a stalemate and intervention was necessary to prevent a coal famine later that winter. Lethbridge's city council and its Board of Trade tried to arbitrate but met with little success as neither was trusted by labor. In November the Hon. W. R. Motherwell, Commissioner of Agriculture with the government of Saskatchewan, fearing a coal shortage, pressured the dominion government to act. The federal government was receptive to intervention because a coal famine would seriously hurt immigration to the prairies and would create much localized hardship. It sent its senior mediator, Deputy Minister of Labor William Lyon Mackenzie King, to find a settlement. King set up in the Lethbridge Hotel and, by alternately cajoling and bullying the workers, brought about an accord. King was helped by the absence of Nanton, who was at the Montreal bedside of his dying mother, and by being able to deal directly with Peter Lawrence Naismith, general manager, and William D. L. Hardie, mines manager, of the Galt interests in Lethbridge. The mines reopened on 6 December 1906.

[Oral tradition among mine officials of the region has it that a basis for settlement of the strike had been arrived at before Mackenzie King reached Lethbridge. Negotiators wired him at Winnipeg to return to Ottawa as he was not needed. However, Mackenzie King insisted on proceeding to Lethbridge to reap the political benefits and publicity that accompanied a settlement.]

The long and bitter strike provided workers with few immediate gains. The miners won a small wage increase and the right of collective bargaining, but because the company refused to collect union dues from the men's wages, they failed to gain union recognition. The disappointment left a bitter legacy: strikes varying in length from three to eight months occurred in 1909, 1911, 1919, 1922, 1923 and 1924.

Based on his experience at Lethbridge, Mackenzie King in 1907 drafted, and Parliament enacted into law, The Industrial Disputes Investigation Act, long a model of labor conciliation legislation. A Royal Commission, chaired by Arthur L. Sifton, was set up to study the coal mining industry in the Province of Alberta. Partially as a result, the Alberta government in 1907 passed its first Workman's Compensation Act. And in 1908, the government legislated the eight-hour day, popularly known as "The Eight-Hour Law," long an objective of labor. The law became effective on 1 April 1909. [On 10 June 1943, the five-day work week began to be seriously discussed as a post-Second World War objective by local coal miners.]

Nevertheless, in spite of strikes and other problems, coal mining played an important part in the economy of Lethbridge, particularly in the early decades of the century. The excellent quality of Lethbridge coal as a domestic fuel was widely recognized and the Galt logo, a shield on which was written in black and red "Galt Coal: Burns All Night," was known to consumers across the four western provinces and in several adjoining states. One of us (AJ) was raised in a coal stove-heated farm home in southwestern Saskatchewan and can attest that Galt coal did indeed "burn all night."

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William Stafford, Senior

domestic coal producing centre in Alberta. The building of the CPR Viaduct (now the CP Rail High Level Bridge) over the Belly River opened up a large coal area north and west of the river. This set the stage for expansion of collieries at what is now Coalhurst and Diamond City and at the former village of Commerce, and the eventual opening of smaller mines such as the Taylor and Federal Mines. In addition, a large number of bore holes were put down and large acreages of coal lands were proved.

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The AR&I company was purchased outright, partly by conveyance and partly by 999-year lease, by the Canadian Pacific Railway on 1 January 1912. (The CPR retained the corporate name, Alberta Railway & Irrigation Company, which is still listed on land titles as owning mineral rights to a large area of southern Alberta.)

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transporting coal from the shaker conveyors to the main haulage. The goal was to see all coal removed by mechanical means. Locally, these machines were introduced into Galt Mine No. 8 as part of an experiment. It was only moderately successful and soon abandoned at No. 8 due to the tenderness of the roof and the large amount of labor required to move the units.

Coal Lands

1. The following districts have been set apart and the lands therein withdrawn from ordinary sale and from settlement, and declared to be coal districts, the same to be known as those of the Souris river, the Bow river, the Belly river, and the Saskatchewan river, the said districts for the present to be composed as follows:

[Districts I. - Souris River Coal District, II. - Bow River Coal District, and IV. - Saskatchewan River Coal District, are listed and their land areas indicated.] III. - Belly River Coal District Townships 8, 9, 10, ranges 21, 22, 23, west of fourth meridian.

2. The land within the said coal districts will be surveyed as soon as possible, and thereafter will be periodically offered for sale by tender or public auction, at an upset price; the same, together with the terms and conditions of the sale, to be fixed from time to time by the Minister of the Interior.

3. With respect to leases which have already been granted, each lessee who has fulfilled the conditions thereof may, within two years from the date of the order-in-council authorizing his lease, convert the leasehold into freehold by paying in cash the upset price placed by the Minister of the Interior on the lands in the coal district wherein the said leasehold is situated; but the lease shall be null and void in all cases where the conditions have not been fulfilled by the lessee, especially the conditions contained in Clause 5 of the said regulations, which is as follows: "That failure to commence active operations within one year, and to work the mine within two years of the commencement of the term of the lease, or to pay the ground rent or royalty, shall subject the lessee to forfeiture of the lease and resumption of the land by the Crown."

4. In cases where the Minister of the Interior satisfies himself that companies, or persons, have expended considerable sums of money in exploring for coal within the limit of any district for which they may have applied under the regulations of the 17th December 1881, the said lands may be sold to such companies or persons at the upset price fixed for lands in the coal district in which such tract may be situated.

5. The boundaries beneath the surface of coal mining locations shall be the vertical planes or lines in which their surface boundaries lie.

6. The rights of lessees, and of persons in favor of whom orders-in-council have been passed, shall not be affected by these regulations, except in so far as they may be consistent therewith.

The Winnipeg Daily Times 19 October 1883

Sir Alexander Galt Museum



Charles Alexander Magrath

Lethbridge mines were desperate for men by 1915. In November of that year idle miners from British Columbia went to work at Coalhurst (Mine No. 0174). In May 1916 a contingent of Japanese miners arrived from the west coast in response to the heavy demand for coal and the shortage of labor. Efforts were made to secure the early release of miners from Canada's armed forces so they could return to work in the coal fields. In spite of all this, by August 1916 mines of the district were choked with orders and about 400 more men were needed, a condition that continued until the beginning of the post-Great War depression around 1919-20.

Coal production peaked in Lethbridge in 1919 when 2,000 men in ten major mines [a total of 19 mines were in operation] produced about one million tonnes of coal. The opening of the Drumheller coal field a few years earlier significantly affected the market once held by Lethbridge's collieries. Production declined fairly steadily until 1964 when, as a consequence of an ill-advised strike by workers at the Standard Mine at Shaughnessy, the local coal mining industry collapsed. For a brief period during the Second World War, 600 men in four major mines [a total of 14 to 16 mines were in operation] produced about one-half million tonnes of coal per year, an increase over the one-third million-tonne annual average during the depression years. Nevertheless, in 1939, miners worked only 25 per-

William Stafford

William Stafford, the son of an English mining engineer and geologist, was born in Patna, Scotland, in 1842. After a Scottish education, he followed his father's calling. In 1867, he emigrated to Westville, Nova Scotia, to manage the coal mines of the Acadia Coal Company. In 1882, he was engaged by Sir Alexander Tilloch Galt to accompany Captain Nicholas Bryant to the West to assess coal mining possibilities there.

As the only practical coal mining engineer in the party, Stafford's counsel carried much weight when Sir Alexander and Elliott Torrance Galt and Bryant met to choose between opening a mine at Blackfoot Crossing, near modern Gleichen, or at the Coal Banks. Stafford opted for the latter because of the quality of the coal. Thus Lethbridge was born.

The actual location of the future city was dictated when, on 13 October 1882, Stafford decided to open a drift mine on the east side of the Belly (now Oldman) River at a point just north of today's CP Rail High Level Bridge.

Stafford supervised the opening of drift mines Nos. 1 to 9 and shafts Nos. 1 to 3. In 1894, he became Inspector of Mines for the District of Alberta and was followed as Mines Superintendent by William Duncan Livingstone Hardie. By this time, Stafford had become interested in ranching and resigned from the Galt company to follow that pursuit. A spacious ranch home, which became a community and social centre, was built in the river-bottom in what is now Peenaquim Park.

William Stafford died on 12 May 1907 and was buried in Mountain View Cemetery.

cent of the time at a production level which was only 40 percent of that in 1928. Six years later, in March 1945, miners worked only two days per week.

Alberta and Lethbridge recognized its coal pioneers on 18 July 1928 when a National Sites and Monuments Board of Canada marker to honor Nicholas Sheran was unveiled in Galt Gardens and a special issue of the Lethbridge Daily Herald was printed. The Lethbridge Historical Society worked for a full year on plans for the impressive ceremony.

The Great Depression of 1929-1939 turned out to be a particularly desperate time for Lethbridge's coal industry. The onset of the depression was brought home to Lethbridgians as early as August 1929 when miners in large numbers began to be laid off for lack of demand for coal. On 28 October, Lethbridge's city council met in emergency session to consider the mounting problems of unemployment and the many demands for relief.

Alderman Andrew Smeaton, labor representative on council, said that unemployment in the coming months would be serious and widespread. Smeaton forecast serious unemployment among Lethbridge miners for two reasons: the winter so far had been mild and little coal had been ordered or consumed, and there had been much con-

version to natural gas. In the United States, the Smoot-Hawley tariff act of 17 June 1930 added a 75-cent surcharge per ton (82 cents per tonne) of imported coal, effectively cutting off that market. As the depression wore on, Saskatchewan, traditionally one of Lethbridge's most assured markets, turned increasingly to its own lignite fields in the Weyburn-Estevan region. All of this compounded the local problem.

The population of Lethbridge averaged about 13,500 during the depression years. There were about 1,000 unemployed persons, mostly coal miners with wives and families, on relief by 3 June 1931. From 1932 to 1939, inclusive, the number of unemployed persons on relief averaged about 2,000 per year. Robert Livingstone was called on to head up relief camps at the exhibition grounds, Warner and elsewhere. The reality of the Great Depression, in Lethbridge as elsewhere, was that an unemployed person could not find any kind of job in any type of work at any rate of pay anywhere. Unemployment Insurance was unknown. Relief, now called welfare, was for many the only hope, the only bulwark against destitution, even actual starvation.

On 20 April 1935, Andrew A. Millar, chief inspector of mines, Edmonton, was notified by general manager Robert Livingstone that a field merger of local coal companies had come into force on 1 April. (Millar had been aware of the corporate restructuring since 22 January 1935 but lacked specifics.) The merger was undertaken with the idea of closing unprofitable operations and amalgamating sales and executive forces so as to reduce overhead and to draw together an organization that could be operated profitably.

The change in ownership affected Galt Mine No. 8 at Lethbridge, formerly owned by the CPR, the Lethbridge Colliery at Coalhurst, formerly owned by Royalties Oil & Shares Corp. Ltd., and the Standard Mine at Shaughnessy and Federal Mine at Lethbridge, formerly owned by the Cadillac Coal Co., Ltd. These properties were united under one company incorporated as the Lethbridge Collieries, Ltd., with head office in Calgary and mine office in Lethbridge. Officials of the new company were: directors--Samuel G. Porter (president), E. A. Lovett, Wm. Toole, Christopher S. Donaldson, and A. E. Whitmore; general manager, Robert Livingstone; secretary-treasurer and sales manager, Benjamin Tyler Coon; mine managers--Galt Mine No. 8, Robert Livingstone; Lethbridge Colliery, John Marshall Davidson; and Standard and Federal Mines, Christopher Storrar Donaldson. "Galt Coal," "Cadillac Coal," and "Imperial Coal" were retained as brand names since they had widespread customer recognition and acceptance.

Benjamin Tyler Coon, an official with the CPR Natural Resources division for many years, succeeded Robert Livingstone upon the latter's retirement in 1938. Ben Coon died in office on 20 September 1943 and was succeeded as general manager by C. S. Donaldson, director of Lethbridge Collieries since the 1935 field merger. Donaldson retired on 31 March 1946 and was followed by John M. Davidson. And on 1 October 1956 Davidson was replaced by R. Donald Livingstone, a son of the first general manager, Robert Livingstone. After closure of the last Galt mine, Livingstone continued as general manager of



William Stafford, Senior

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Robert Livingstone

ducers of sulfur dioxide in North America.) Acid rain, at an average pH of 4.2, has since the 1960s caused acidification of 100,000 eastern Canadian lakes--about one in seven of all lakes east of Manitoba--and a massive decline in the vitality of eastern forests. Unfortunately transportation costs to Ontario increase the price of western coal by 50 percent. The federal government committed \$27 million from a \$1-billion Western Diversification Fund to help make western coal more competitive.

At time of writing coal goes east each week in unit trains from the Coal Valley area's Luscar Sterco mine, which has a contract with Ontario Hydro.

There was a flurry of local interest in coal again in the 1980s. The world price of oil had increased about 20X from its 1970 price of US\$1.80 a barrel and this had caused countries such as Japan to look elsewhere than the Middle East for assured supplies of energy. Coal was such a product and Canada was a politically-stable producer. Thus Canadian coal production increased from 8.2 million tonnes in 1969 to 33.6 million tonnes in 1979 and was projected to reach 37.2 million tonnes in 1981.

In April 1980, Petro-Canada Ltd. undertook to open an experimental mine near Kipp in Sec 30, Twp 9, Rge 22 and to obtain a sample of coal for testing in Japan and other Pacific Rim countries. A 250-tonne sample was shipped in December. Expectations were that, if agreements could be reached with prospective customers, by about 1984 the company would develop a mine to cost \$100 million and to employ 300 persons. Over \$5.0 million was expended for a concrete shaft, now covered over.

On 26 May 1981, Fording Coal Ltd., the coal mining

arm of CP Investments Limited, and Idemitsu Kosan Co. Ltd. of Japan announced their intention to open an underground thermal coal mine near Shaughnessy. The price of thermal coal had tripled since 1979, to around \$70 per tonne, thus making the project feasible. According to

The Livingstones

Coal mining was in the Livingstone's blood. Members of the family were coal miners in Fife, Lanark and West Lothian, Scotland, for at least four generations before emigrating to Petersburg, Ohio, where they operated a coal mine. The first generation of Lethbridge Livingstones was born there and, in order of age, were John, James and Robert. They grew up with coal mining and constituted the fifth generation so employed.

The brothers were prompted to come to Lethbridge because of their association in coal mining in Tennessee with their cousin, William Duncan Livingstone Hardie, called WDL, who preceded them to Lethbridge. He was manager of the Alberta Railway and Coal Company mines in the Lethbridge Field.

John, the eldest, was known to his fellow workers as Big Jack. He came to Lethbridge in 1896 as an official with the Alberta Railway & Coal Company. With his family, he spent one year in Beaver Mines where he and the late Bill Ripley opened the Christie Mine for the Great Northern Railway. The John Livingstone family lived for the entire year in a tent, John's wife, Elsie, being the cook for the mining crew. He then returned to Lethbridge and was pit boss at the Galt mines until his death in 1931. He was a member of Wesley Methodist Church, North Star Lodge No. 4 A. F. & A. M. [Ancient Free and Accepted Masons], and the Shrine Club [officially The Ancient Arabic Order of Nobles of the Mystic Shrine, or Shriners].

James, or Jim, as he was known, spent 40 years in the coal mines at Lethbridge. He came in 1897 and was associated with the Galt mines as hoisting engineer, master mechanic and later as surface foreman at Galt Mines Nos. 6 and 8. Jim was a member of Southminster United Church [formerly Wesley Methodist Church] and the North Star Lodge No. 4 A. F. & A. M.

Robert, the youngest, was a mining engineer. He worked in Ohio, Tennessee and Kentucky before coming to Lethbridge in 1895 where he became underground foreman of Galt Mine No. 3 and later at Galt Mine No. 6, when he left to work with the Alberta government. He served in turn as district mines inspector at Lethbridge and Calgary, and later as chief inspector of mines at Edmonton. He left that post in 1910 to return to Lethbridge as manager of the Galt mines. When the field merger took place at Lethbridge in spring 1935, resulting in the formation of Lethbridge Collieries Ltd., Livingstone was appointed general manager, a post he held until his retirement in 1938.

Sir Alexander Galt Dies

Montreal, September 19 [1893].--Sir Alexander Tilloch Galt, G.C.M.G., D.C.L., died at 3:30 this morning. The deceased gentleman was one of the most prominent men in Canadian politics prior to, and for some time after, confederation, and was the first occupant of the position of High Commissioner for Canada in England, the position now filled by Sir Charles Tupper.

Sir Alexander Tilloch Galt, son of John Galt, the author, by Elizabeth, daughter of Dr. Tilloch, was born at Chelsea, September 6, 1817, and educated in England and Canada. He was in the service of the British and American Land Company from 1833 to 1856, and commissioner and manager of their entire estates from 1844 to 1856. He was first elected to the Canadian parliament in 1849. The governor general, Sir E. W. Head, requested him to form an administration in August 1856. This task he declined, though he joined Mr. Cartier's administration as finance minister, and held that office until the ministry was defeated on the Militia bill in May 1862. Sir Alexander resumed his post as finance minister in March 1864, and retired in August 1866, when the cabinet failed to carry a measure securing educational privileges to the Protestant minority in Lower Canada, in view of the greatly increased powers obtained by the French and Roman Catholic majority under confederation. Mr. Galt felt that, as the representative of the Protestants of Lower Canada, he could best serve their interests by retiring. The results appear to have justified his views. He was appointed a delegate for Lower Canada, to confer with

the Imperial government on the subject of confederation, and in that capacity, although not a member of the Canadian government, he secured protection for his co-religionists. On the confederation being affected he was appointed minister of finance in the new Dominion government, and held that office from July 1 till November 4, 1867, when for private reasons he resigned.

Sir Alexander was regarded as the ablest financier in the colonies, and had taken a prominent part in all measures adopted to unite and consolidate British America. He was created a knight commander of the order of St. Michael and St. George in 1869, for his long official colonial service. In July 1875 he was appointed a commissioner on behalf of Great Britain, under treaty of Washington, May 1871, and more recently he acted as a member of the Halifax fisheries commission. He was nominated a GCMG, May 25, 1878. Sir Alexander was appointed high commissioner for Canada, in England, in 1880, and was delegate for Canada at the International Monetary Conference in Paris in 1881. He was a member of the executive and general committees of the great International Fisheries exhibition in 1883. In 1883 he resigned his high commissionship and returned to Canada.

In 1882 he established the North Western Coal and Navigation Company, Limited, which opened at Lethbridge the first coal mines in the North-West Territories as a commercial enterprise; and in 1885 constructed 109 miles (175 km) of railway, connecting the mine with the CPR.

The Lethbridge News 21 September 1893

working. [Cost of timber props to support the roof was an expensive item, averaging about ten cents per tonne of coal produced. Thus, in June 1882, the Galts established a sawmill about 48 km northwest of Fort Macleod in the Porcupine Hills to produce mine props and milled lumber.]

The cars of coal hauled to the top of the Incline were taken to the Bankhead, where they were tipped over screens, the various classes of lump, nut and screenings being sorted out and landed in three separate cars standing on parallel tracks under the screens. The Incline had a double track, and on each trip a rake of five cars holding about a tonne of coal each was taken up, a rake of five empties being sent down at the same time. A trip was made in three minutes. At the Bankhead a colliery car of coal was dumped over the screens every 45 seconds during working hours. Mining from the shafts was the same as from the drifts except that entries were started from the bottom of the shaft instead of from the river bank. As the loaded colliery cars came back to the bottom of the shaft they were pushed one at a time on to an elevator platform and were carried to the top of the shaft, 91 m, in 20 seconds.

A large quantity of machinery was used in connection with the colliery, including several 60 and 100 HP steam engines with boilers, hoisting drums, and cages. A smaller engine was used to pump water out of the shafts. Legg mining machinery was used to undercut the face, after

which miners shot down the coal with black powder and loaded it on to mine cars. Legg cutting machines operated on compressed air brought in from a compressor at the head of the Incline.

It is not generally known that the Galt company set up the town's first waterworks system in 1883. It was designed to wash coal from the drift mines but, in 1885, a pipeline was run up the coulee hill to a water tank at the roundhouse. The line was then extended to a hydrant at the corner of 1st St and 1st Ave S. Horse-drawn 2275-L water tanks loaded up here and their drivers filled barrels at all homes and businesses. Also nine underground 68.2-m³ water reservoirs were built in the downtown area for fire fighting purposes. The company water line eventually was extended to Galt No. 3 Mine. It was replaced by the modern civic waterworks, opened on 1 January 1905.

The company produced 20 865 tonnes of coal in 1885, its first year of operation with a transport system in place. In 1893, output was 726 tonnes a day or 145 149 tonnes for the season, for all of which there was ready sale. The Galt seam being worked at Lethbridge contained 20 180 tonnes of coal under each hectare. About half could be extracted, the rest was left as supports for the main galleries and as waste. About 101 ha had been worked out by 1893.



William Stafford, Senior

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It was unlikely that coal miners saw it as the beginning of the end of their way of life. But in July 1912 The Canadian Western Natural Gas, Light, Heat and Power Company Limited began laying natural gas mains in the city, the actual hook-up to homes taking place in October. Many citizens resisted switching from coal to gas as coal mining was Lethbridge's main industry. Veteran newspaperman Harold G. Long said years later that he shovelled coal for a couple of years after gas arrived before taking the plunge to the new fuel. Long noted that it took coal miners a couple of decades before they began to follow the trend because it made them feel like traitors.

It soon became apparent that mechanized methods must supersede the older methods of hand loading and the use of horses for intermediate haulage of coal underground. William D. L. Hardie began the process locally by installing endless rope haulage in Galt Mine No. 3. The Standard Mine, developed by Christopher Storrar Donaldson in 1927 at what later became Shaughnessy, was a leader in the process of converting to electricity from compressed air. It was the first fully electrified coal mine in the Lethbridge area. By the mid-1940s conveyors of the shaker type, equipped with self-loading heads, were being used for loading the coal. Horse haulage had been outmoded by the use of 610-m belt conveyors for

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The companies were: North Western Coal & Navigation Company, Limited, formed in 1882, absorbed by the Alberta Railway & Coal Company in 1889; Alberta Railway & Coal Company, formed in 1884, absorbed by the Alberta Railway & Irrigation Company in 1904; Lethbridge Land Company, Limited, formed in 1888, absorbed by the AR&ICo in 1904; Alberta Irrigation Company, formed 1893, reorganized as the Canadian North-West Irrigation Company in 1899, absorbed by the AR&ICo in 1904; Great Falls and Canada Railway Company, formed in 1889 to build the Sweetgrass-Great Falls portion of a narrow gauge railway, sold to J. J. Hill of the Great Northern Railway in 1901; St. Mary's River Railway Company, formed in 1898, absorbed by the AR&ICo in 1904; and the Alberta Railway & Irrigation Company, formed by amalgamation of all previous Galt companies on 1 October 1904. It was known for a time as "The Group" but became best known by its initials, "The AR&I."

The AR&I company was purchased outright, partly by conveyance and partly by 999-year lease, by the Canadian Pacific Railway on 1 January 1912. (The CPR retained the corporate name, Alberta Railway & Irrigation Company, which is still listed on land titles as owning mineral rights to a large area of southern Alberta.)

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His first job was to survey and help to open mines on the island of Spitzbergen--mines, ironically, that were blown up by Canadian troops when the island was occupied by Germans in the Second World War.

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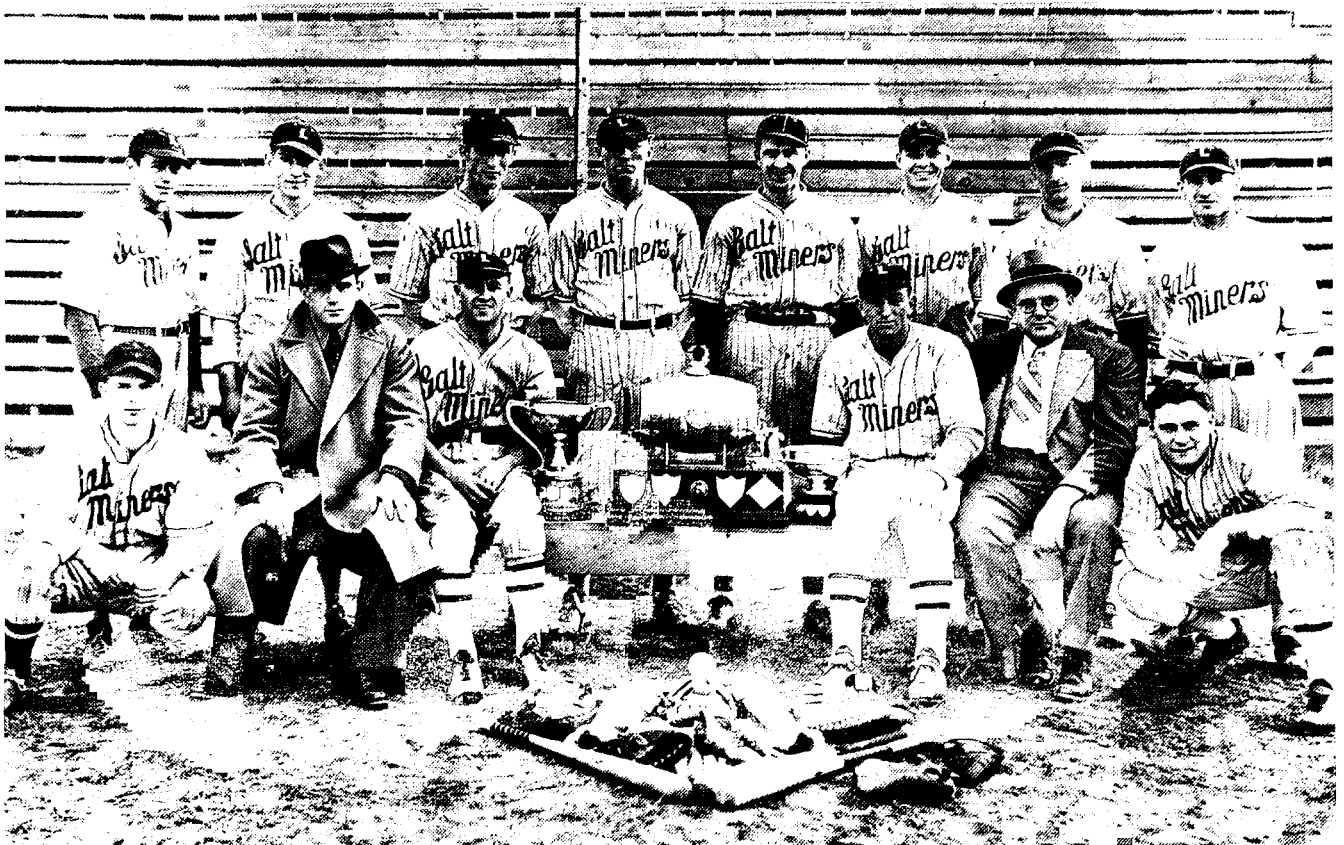
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"In light of the difficult strata conditions in some areas and the product-size demands of the market, the perseverance of the largest producer [Mine No. 1263] to mechanize the operation was commendable. The productivity of this field was about 2.5 tonnes per man day, but this figure must be assessed in light of the severe limits on choice of equipment imposed by the market conditions."



Miners needed relaxation. Two methods of attaining this were to organize a band (above) or a baseball team (below). Unfortunately, there is very little information on either of these groups in the Galt archives. The band was not the first such organization but probably dates to the first decade of this century. The baseball team won the Senior Baseball Championship in 1936; the late George Onofrychuk is standing, second from the left.



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Entrances to Drift Mines No. 1 (right) and No. 2 (left) in 1885. William Stafford and 15 Nova Scotia miners began to drive these drifts on 13 October 1882. They closed in 1893.

the old workings to retrieve rails and other equipment left in the mine at the time of abandonment.

The AR&ICo's Galt Mine No. 6 was completed in November 1908 and development of the plant and mine was carried out on a large scale. A tippie with four loading tracks and one bypass track was installed and was fully equipped to handle 1634 tonnes of coal in eight hours. When development of a new mine was being contemplated around 1907-1908, the AR&ICo had 3240 ha of proven coal lands centred on Sec 2, Twp 9, Rge 22 at

the west end of what became the CP Rail High Level Bridge. (A shaft was sunk on the property in 1934 and became Galt Mine No. 8.) Delays in the completion of the bridge project because of the 1908 floods forced the company to act. It opted to sink the new shaft at what became the village of Hardieville instead of on the west side of the river opposite Lethbridge.

Galt No. 6 underground workings (located in Lsd 15, Sec 18, Twp 9, Rge 21) were discontinued on 14 March 1935. Its equipment was withdrawn and the mine was

31 October 1885 Letter Home

The following letter was written by a visiting minister to his ten-year old son. He was in Lethbridge trying to set up a Presbyterian mission under the direction of Rev. W. P. MacKenzie.

"My Dear Son

"Lethbridge is on the east bank of the Belly River. It is about 100 miles from Medicine Hat and 25 miles from Fort Macleod. To the west the Rocky Mountains can be seen for 150 miles. All the mountains are covered by snow although the weather here is dry and warm. Lethbridge is only two months old and yet there is a population of about 1,000 they say. The place gets its importance from the coal mines. The coal seam runs along the river on both sides. The prairie is about 200 feet higher than the river flat and hence there is a layer of about 200 feet of earth and rock above the coal. They work the coal in from the bank of the river. They dig in galleries and blast out the coal with powder. The seam is about 5 ft 2 in thick. They take all this out, break

it into lumps and put it in cars (small cars that hold about a ton each) and they have mules and horses to haul it out from underground. I was in the pit and let me tell you what I saw. We went in by a passage which was at first about 6 ft high. This passage was cut in the coal seam. They cut out the coal from these [passages] and then cut galleries away from them. They leave a large pillar of coal between the passages to support the roof. When they cut away to the back of the galleries they begin to take out coal from between the galleries and put in posts to support the roof. Of course the mine is all dark and the men work with a lamp hung on their caps in front. In cutting coal they cut along one side and cut out below the galleries. They leave a hole and put in a charge of powder and fire it off and a good deal of coal comes down. This they load on the cars. The picks they use are small and sharp and they get them sharpened several times a day. Two men work in each gallery and between them they have eight picks. When one gets dull they take another and then take them all out at noon or night to be sharpened.

"The men get \$1.25 per ton for taking out the coal. Each miner can dig from 2 to 3 tons per day and there are 86 of them. They are taking out over 200 tons a day now."

transporting coal from the shaker conveyors to the main haulage. The goal was to see all coal removed by mechanical means. Locally, these machines were introduced into Galt Mine No. 8 as part of an experiment. It was only moderately successful and soon abandoned at No. 8 due to the tenderness of the roof and the large amount of labor required to move the units.

Coal Lands

1. The following districts have been set apart and the lands therein withdrawn from ordinary sale and from settlement, and declared to be coal districts, the same to be known as those of the Souris river, the Bow river, the Belly river, and the Saskatchewan river, the said districts for the present to be composed as follows:

[Districts I. - Souris River Coal District, II. - Bow River Coal District, and IV. - Saskatchewan River Coal District, are listed and their land areas indicated.] III. - Belly River Coal District Townships 8, 9, 10, ranges 21, 22, 23, west of fourth meridian.

2. The land within the said coal districts will be surveyed as soon as possible, and thereafter will be periodically offered for sale by tender or public auction, at an upset price; the same, together with the terms and conditions of the sale, to be fixed from time to time by the Minister of the Interior.

3. With respect to leases which have already been granted, each lessee who has fulfilled the conditions thereof may, within two years from the date of the order-in-council authorizing his lease, convert the leasehold into freehold by paying in cash the upset price placed by the Minister of the Interior on the lands in the coal district wherein the said leasehold is situated; but the lease shall be null and void in all cases where the conditions have not been fulfilled by the lessee, especially the conditions contained in Clause 5 of the said regulations, which is as follows: "That failure to commence active operations within one year, and to work the mine within two years of the commencement of the term of the lease, or to pay the ground rent or royalty, shall subject the lessee to forfeiture of the lease and resumption of the land by the Crown."

4. In cases where the Minister of the Interior satisfies himself that companies, or persons, have expended considerable sums of money in exploring for coal within the limit of any district for which they may have applied under the regulations of the 17th December 1881, the said lands may be sold to such companies or persons at the upset price fixed for lands in the coal district in which such tract may be situated.

5. The boundaries beneath the surface of coal mining locations shall be the vertical planes or lines in which their surface boundaries lie.

6. The rights of lessees, and of persons in favor of whom orders-in-council have been passed, shall not be affected by these regulations, except in so far as they may be consistent therewith.

The Winnipeg Daily Times 19 October 1883

Sir Alexander Galt Museum



Charles Alexander Magrath

Lethbridge mines were desperate for men by 1915. In November of that year idle miners from British Columbia went to work at Coalhurst (Mine No. 0174). In May 1916 a contingent of Japanese miners arrived from the west coast in response to the heavy demand for coal and the shortage of labor. Efforts were made to secure the early release of miners from Canada's armed forces so they could return to work in the coal fields. In spite of all this, by August 1916 mines of the district were choked with orders and about 400 more men were needed, a condition that continued until the beginning of the post-Great War depression around 1919-20.

Coal production peaked in Lethbridge in 1919 when 2,000 men in ten major mines [a total of 19 mines were in operation] produced about one million tonnes of coal. The opening of the Drumheller coal field a few years earlier significantly affected the market once held by Lethbridge's collieries. Production declined fairly steadily until 1964 when, as a consequence of an ill-advised strike by workers at the Standard Mine at Shaughnessy, the local coal mining industry collapsed. For a brief period during the Second World War, 600 men in four major mines [a total of 14 to 16 mines were in operation] produced about one-half million tonnes of coal per year, an increase over the one-third million-tonne annual average during the depression years. Nevertheless, in 1939, miners worked only 25 per-

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George Washington Houk and his wife, Victoria.

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- On 9 March 1936 a memo indicated that the mine was in retreat and that there was squeeze (over-stressing) on some of the remaining pillars and stumps in the mine. This was probably the result of the removal of many of the pillars and barrier pillars left to support the roof during earlier development work.
- The mine was officially abandoned on 15 September 1941 due to the lack of any more recoverable coal in the workings.
- The final entry in the file was a memo from Idwal N. Potter, district inspector, to the director of mines. It noted that Mine No. 54's entrances were adequately sealed when he checked them on 12 August 1963.

Mine No. 0055

Mine No. 0055, generally known as Russell's Mine, The Russell Mine and occasionally as The Pothole Mine, also Holton's Mine and Loxton's Mine, was located on Pothole Coulee in Lsd 8, Sec 18, Twp 7, Rge 21. The seam was at a depth of 18 to 37 m and consisted of a shale roof, 1.07 m of coal, and a shale floor. Total production of the mine was 24 900 tonnes of coal. A seasonal operation, it had a long history of changes in lessee/operators, as follows:

Nicholas and Marcella Sheran

Nicholas Sheran (1841-1882) packed a lot of living into his 41 years. Born in New York City, he apprenticed as a printer, then spent several years on Arctic whalers. He served in Company C of the 99th Regiment, New York National Guard, as a second lieutenant and saw service during the Civil War. During his time in the Army, Sheran met a soldier named Joseph Healy and, after hostilities ceased, he accompanied him back to Montana. There he became involved with John Jerome Healy, Joseph's older brother, and even in 1866 somewhat of a legend on the Montana frontier. Sheran became an Indian fighter, prospector and trader.

About June 1874 he came to Fort Whoop-Up, an American whiskey-trading post established in 1869 by Alfred Baker Hamilton and Johnny Healy. Sheran likely was familiar with the place and may have visited the post on occasion. He drew on the boating skills acquired as a boy on Arctic whalers and established a ferry service, consisting of two flat-bottomed rowboats, across the Belly River about 750 m northwest of the fort. He grubbed coal from a 45-cm seam in his spare time, selling the surplus to the Whoop-Up traders.

The North-West Mounted Police established the first Fort Macleod on an island in the Old Man's River on 13 October 1874. Sheran saw a larger market for his coal and moved downriver to The Coal Banks when a 1.5-m thick seam was exposed. By December NWMP work parties were hauling coal from Sheran's mine.

Sometime in 1877 Marcella Sheran (1844-1896) left New York and travelled to Fort Benton, then on to the Belly River country in the North-West Territories. [It has been impossible to document any of this as her name simply does not appear in obvious sources such as the Fort Benton Record or the Macleod Gazette.] After her arrival, she proved to be a valued partner to her brother as she had a sharp business sense and some book-keeping ability. She married Joseph McFarland of Fort Macleod on 4 July 1878 and went to live on his Pioneer Ranch.

In spite of vociferous opposition from his sister, after 1878 Nicholas Sheran lived common-law with a Peigan Indian woman called Mary Brown. Two children were born of the union: Charles, in February 1880; and William, in November 1882. Sheran never saw the second boy as he [Sheran] had drowned at Kipp's Crossing of the Old Man's River the previous May.

Marcella Sheran McFarland managed her brother's estate with considerable skill until her death from pneumonia in October 1896.

For additional information on Nicholas Sheran and his sister, Marcella, see Johnston (1983).



George Washington Houk and his wife, Victoria.

- In October 1935 the mine was leased to Joseph J. (Joe) Hamilton. The mine was worked seasonally over the next six years by Hamilton. Little new development work was done and much of the output seemed to have been taken from old pillars in the mine. There was some encroachment into Galt No. 8 leases. Hamilton extracted in the order of 115 000 tonnes of coal during the six years he had the mine.
- On 9 March 1936 a memo indicated that the mine was in retreat and that there was squeeze (over-stressing) on some of the remaining pillars and stumps in the mine. This was probably the result of the removal of many of the pillars and barrier pillars left to support the roof during earlier development work.
- The mine was officially abandoned on 15 September 1941 due to the lack of any more recoverable coal in the workings.
- The final entry in the file was a memo from Idwal N. Potter, district inspector, to the director of mines. It noted that Mine No. 54's entrances were adequately sealed when he checked them on 12 August 1963.

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The year 1893 was a significant one at Lethbridge. It was the best year so far for the company even though from 1888 to 1896 the Canadian economy was depressed and there were few markets for coal. But after 1893 total tonnage and sales of coal from the Lethbridge mines fell off and did not recover until 1898 when output reached 152 643 tonnes, increasing to 218 193 tonnes in 1905. The Incline shut down on 15 May 1893 and signalled the end of the riverbottom drift mines. Seventy-five persons, including 50 miners, were affected although all but about 15 were absorbed elsewhere in the Galt organization. Finally, Sir Alexander Galt died on 21 September 1893. The *Lethbridge News* said, "Sir Alexander Galt deserved well from the people of Canada as a whole, but there are some parts of it which have particularly benefited by his abilities. Among these was the Town of Lethbridge, which owes its very existence to the dead statesman. That large deposits of coal existed in this district was well known to many before Sir Alexander Galt undertook the task of forming a strong company to develop and work the mines. It was no easy task to induce a large amount of English capital to be ventured in such an undertaking. But Sir Alexander Galt had peculiar advantages. His residence and financial dealings on behalf of the Canadian government in London had placed him in touch with the great English capitalists by whom his financial ability was fully recognized."

Galt No. 1 shaft closed on 5 March 1897. As a result

a large number of miners, principally recently-employed Hungarians, left for the Kootenay country and new opportunities there.

The abandonment of the riverbottom drift mines in 1893 implied a new devotion of the Galt companies towards large-scale exploitation of the coal resources at Lethbridge. But worldwide depression and coal markets that never quite lived up to expectations plagued the operation. Colonization was proceeding, albeit slowly, and the CPR, as the only major commercial market in the region, essentially dictated what the Galt mines would produce and how much they would receive for their product.

All of this changed around the turn of the century. The worldwide depression ended, in part because of massive gold discoveries in South Africa and the Klondike. Settlement of the western prairies finally got underway accompanied by a booster mentality that thought anything was possible. Locally, the Galt company's new 48 600-ha irrigation project was the first area to be settled and farmed. By 1905 dry farming techniques had become widely known and settlement of the dryland--the so-called Winter Wheat Lands--was well underway. Railway lines were laid into the newly-settled lands and many small towns developed. The coal mines of the Lethbridge area began to proliferate, as will be shown on the following pages.

But first we will discuss briefly the 20th century rise and fall of Lethbridge's coal industry.

Lethbridge Colliery, Alberta, N.W.T. 1885 And Previous Years

In the Lethbridge colliery there are two seams of coal separated by a thin layer (about one inch) of slate.

These seams are undulating and very regular, their combined thickness being about five feet two inches.

The system of working is that of laying off "rooms" at right angles to the double "entries" (each being nine feet wide) which are driven "over the butt" of the coal.

The "rooms" are run nine feet wide a distance of 15 feet back from the "entries" when they are then widened out to 20 feet. By this means all the coal is extracted, leaving pillars 15 x 24 feet along the sides of the "entries" to support the roof.

The company has introduced six American coal mining machines and two air drills; these machines greatly facilitate the mining and enable the company at any time to greatly increase their output, should the demand require it.

The power employed to work the machines is

compressed air manufactured by a Norwalk compressor 20-inch cylinder with 24-inch stroke and weighs about 15 tons. In connection with this compressor, there are three reservoirs for storing the air, about 5,000 feet of five-inch main pipe and about 5,000 feet of one-and-a-half-inch pipe for the purpose of conveying the air to the various workings of the mine. The compressor is situated in the same building with a 60 H. P. hoisting engine, which hauls the trucks out of the valley, 2,200 feet up an inclined railway on to the "Bankhead", where the coal is dumped into chutes and discharged into the railway cars, which stand on scales below. Compressed air is also utilized for pumping water out of the mines, running the emery wheel for sharpening tools and [running] the forge in the blacksmith's shop. Three large tubular boilers are employed for making steam for the hoisting engine and compressor.

Total expenditures during the year [1885] on Capital Account amounts to \$38,283.00 while Working Expenditure was \$177,480.00.

Total expenditure up to 31st December 1885 [presumably from April 1882] on Capital Account amounts to \$175,180.52 while the Working Expenditure up to the same date amounts to \$201,323.85.

C. A. Magrath
Lethbridge, Alberta



Miners needed relaxation. Two methods of attaining this were to organize a band (above) or a baseball team (below). Unfortunately, there is very little information on either of these groups in the Galt archives. The band was not the first such organization but probably dates to the first decade of this century. The baseball team won the Senior Baseball Championship in 1936; the late George Onofrychuk is standing, second from the left.

On 24 November 1937, Holton & Minor registered "Russell Coal" as the trade name of the coal being taken by them from the mine.

Mine inspectors had their problems with George Russell and the succession of lessees, as they did with many small operators, usually involving the sending in of reports and other documentation, qualifications of mine employees, surveys and ventilation in the mine.

The mine was abandoned on 14 April 1941, at the close of the 1940-41 season.

Mine No. 0056

Located in Lsd 2 and 3, Sec 7, Twp 7, Rge 21, in the coulees west of the CHEC-Radio transmitter on Highway No. 5, the total production from this mine was 66 836 tonnes of coal. There were two seams at depths of approximately 38 and 42 m. Composition of the top seam was 46 cm coal, 8 cm clay, 23 cm coal with a rock roof and floor; of the bottom seam, shale roof, 51 cm coal, 18 cm blackjack, 31 cm coal and a shale floor. Known originally as The Old Houk Mine but more commonly as The Baker Mine, it was owned and/or operated by:

George Houk	1902-05
Thomas R. Baker	June 1909-10
Thomas H. Baker & Son	Apr 1910-15
Edward Oliver & Sons	June 1915-17
Benjamin Oliver	June 1917-18

Abandoned: 16 February 1918

William Urwin	Feb 1920
John Rollingson	Oct 1920-22

Abandoned: 13 February 1922

Roscoe J. Baker	July 1923
Arthur Bembridge	Aug 1923-24

Abandoned: 31 March 1924

Razzolini, Filestino & Loxton	July 1927-28
Razzolini & Filestino	Jan 1928
Albert Razzolini	Oct 1928-29
Razzolini & Bonetti	Oct 1929-30
Razzolini, Bonetti & Pederzolli	May 1930-32
Razzolini, Pederzolli & Bridarolli	Aug 1932-33
Razzolini & Bridarolli	Sept 1933-45
Albert Razzolini	Jan 1945-54

Abandoned: September 1954

The registered trade mark for coal from this mine was "Baker Coal."

George Washington Houk, a frontiersman of the Whoop-Up era, ran cattle in the vicinity in the late 1880s and, presumably, opened the mine at that time. Houk operated a wholesale liquor business in Lethbridge and may have rented the mine to others although markets would have been few.

Like all small mines in the region, this one produced coal on an intermittent basis depending on local demand. By 1916, four of Edward Oliver's sons had enlisted in the 113th Battalion, Lethbridge Highlanders, or the 175th Battery, CFA, and he was left to operate the mine by himself until his son, Benjamin, was discharged for medical reasons.

In 1917 Benjamin Oliver took over the lease from his father, Edward Oliver. Ben Oliver and his wife, "Sis" [Elizabeth Howard Oliver], worked as a team, she doing

George Rollingson

George Rollingson was born in Northumberland, England, on 10 April 1881. He went to work in the coal pits there as a boy of ten.

With his brother, John, he came to Lethbridge in 1902 where they got a job with George F. Russell in his Pothole Coulee mine. In 1904 there was a business disagreement between the brothers, the upshot being that John remained at the Russell mine while George returned to England.

George Rollingson continued to work in the coal mines in the Old Country but found time to marry in 1904 and start a family with the birth of his son, Henry, in 1906. (Another son, Albert, was born in 1923.) In 1913, probably sensing the opportunity for a better life, he returned to Canada and to Lethbridge.

He got a job as overman at the Malloy Mine near Picture Butte. But he spent much of his spare time trying to get started in a mine of his own. He secured a coal lease on a tract of land in the Pothole district from rancher Wm. D. (Curly) Whitney, paying him 50 cents per ton of coal mined. And whenever he was able, he put in time trying to develop the property. As soon as it looked as if the new mine might be a commercial success, Rollingson left the Malloy brothers and started on his own.

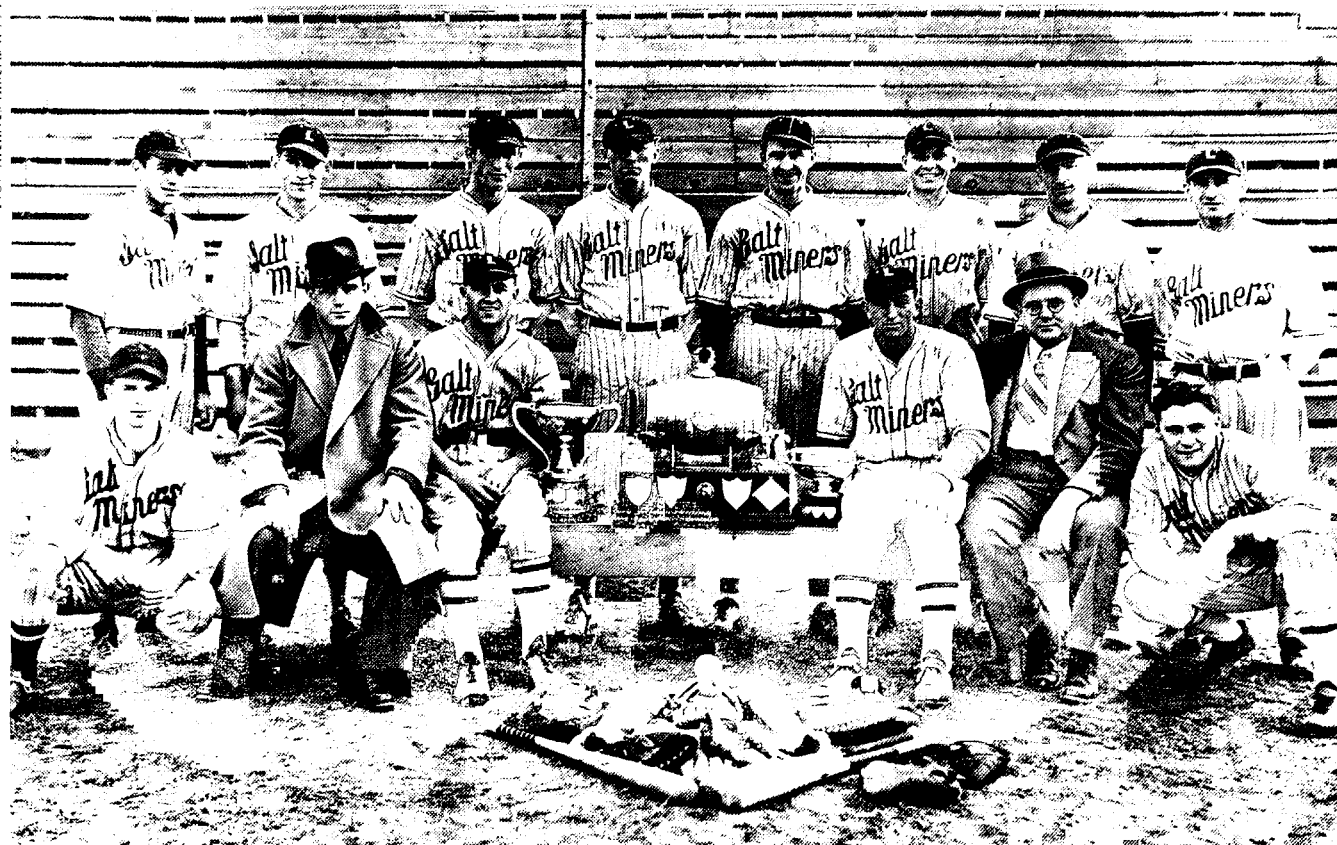
The new mine was located near the junction of the St. Mary and Oldman Rivers. Rollingson registered the name of the mine as "The Twin River Coulee Mine" and the brand name "Whoop Up Coal" for the product. The Mines Branch assigned a

the outside work and he doing the inside mining. One of her duties was to haul coal up an incline to the tippie, then help Mr. Allison, a local coal dealer, to load his wagon and to get up the coulee hill. In the evening Mrs. Oliver and baby Pearl usually came to the mine. The baby was placed in her blankets in a corner while the mother took over the drilling machine. "Sitting on an empty powder keg, she would bore holes in the face of the coal that I [Ben Oliver] had prepared for blasting. When all was ready Sis and baby were off home to make supper while I went back to fill the holes with powder and blast loose the next day's supply of coal."

There were two coal seams on the property, about 3.6 m apart. John Rollingson was the first to mine the top seam, apparently a seam other than the Galt seam. The mine was closed by R. J. Baker on 31 March 1924 and remained closed until 1927. The mine was abandoned in September 1954 because of too much water. The mine was worked for only two days a week but pumps had to be kept going for seven days--an uneconomical operation.

Mine No. 0092

Known successively as The Barnes Mine, The River-view Mine, Royal Collieries Mine and The Royal View Mine, this colliery was located in portions of Secs 29, 30, 31, and 32, Twp 9, Rge 21. The seam measured 1.2 m in



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Agency Receipt No. _____

No. 9528

DOMINION



LANDS.

Cash, \$ 50.00

Scrip, \$ _____

Total, \$ 50.00



Received from Mr. William Barnes
of Leithridge, Alberta
the sum of Fifty — — — — — Dollars,
being for payment for the ~~surface~~ first instalment of the
purchase money of surface and coal mining rights
on The North West 1/4 Legal Subdivision 5. & South West 1/4 of Legal Subdivision
of Section 32 in Township 9 Range 21
West fourth Meridian.

W. H. Cunningham
Agent of Dominion Lands.

A Dominion Lands receipt issued to William Barnes on 27 May 1896 for purchase of 20 ac [8.1 ha] of surface and coal mining rights. Barnes initially got into real estate but lost most of his town property in the depression of the early 1890s. This purchase started him in the coal mining business. Eventually he sold out to Royal Collieries. (See Mine No. 92.)

Sir Alexander Galt Dies

Montreal, September 19 [1893].--Sir Alexander Tilloch Galt, G.C.M.G., D.C.L., died at 3:30 this morning. The deceased gentleman was one of the most prominent men in Canadian politics prior to, and for some time after, confederation, and was the first occupant of the position of High Commissioner for Canada in England, the position now filled by Sir Charles Tupper.

Sir Alexander Tilloch Galt, son of John Galt, the author, by Elizabeth, daughter of Dr. Tilloch, was born at Chelsea, September 6, 1817, and educated in England and Canada. He was in the service of the British and American Land Company from 1833 to 1856, and commissioner and manager of their entire estates from 1844 to 1856. He was first elected to the Canadian parliament in 1849. The governor general, Sir E. W. Head, requested him to form an administration in August 1856. This task he declined, though he joined Mr. Cartier's administration as finance minister, and held that office until the ministry was defeated on the Militia bill in May 1862. Sir Alexander resumed his post as finance minister in March 1864, and retired in August 1866, when the cabinet failed to carry a measure securing educational privileges to the Protestant minority in Lower Canada, in view of the greatly increased powers obtained by the French and Roman Catholic majority under confederation. Mr. Galt felt that, as the representative of the Protestants of Lower Canada, he could best serve their interests by retiring. The results appear to have justified his views. He was appointed a delegate for Lower Canada, to confer with

the Imperial government on the subject of confederation, and in that capacity, although not a member of the Canadian government, he secured protection for his co-religionists. On the confederation being affected he was appointed minister of finance in the new Dominion government, and held that office from July 1 till November 4, 1867, when for private reasons he resigned.

Sir Alexander was regarded as the ablest financier in the colonies, and had taken a prominent part in all measures adopted to unite and consolidate British America. He was created a knight commander of the order of St. Michael and St. George in 1869, for his long official colonial service. In July 1875 he was appointed a commissioner on behalf of Great Britain, under treaty of Washington, May 1871, and more recently he acted as a member of the Halifax fisheries commission. He was nominated a GCMG, May 25, 1878. Sir Alexander was appointed high commissioner for Canada, in England, in 1880, and was delegate for Canada at the International Monetary Conference in Paris in 1881. He was a member of the executive and general committees of the great International Fisheries exhibition in 1883. In 1883 he resigned his high commissionship and returned to Canada.

In 1882 he established the North Western Coal and Navigation Company, Limited, which opened at Lethbridge the first coal mines in the North-West Territories as a commercial enterprise; and in 1885 constructed 109 miles (175 km) of railway, connecting the mine with the CPR.

The Lethbridge News 21 September 1893

working. [Cost of timber props to support the roof was an expensive item, averaging about ten cents per tonne of coal produced. Thus, in June 1882, the Galts established a sawmill about 48 km northwest of Fort Macleod in the Porcupine Hills to produce mine props and milled lumber.]

The cars of coal hauled to the top of the Incline were taken to the Bankhead, where they were tipped over screens, the various classes of lump, nut and screenings being sorted out and landed in three separate cars standing on parallel tracks under the screens. The Incline had a double track, and on each trip a rake of five cars holding about a tonne of coal each was taken up, a rake of five empties being sent down at the same time. A trip was made in three minutes. At the Bankhead a colliery car of coal was dumped over the screens every 45 seconds during working hours. Mining from the shafts was the same as from the drifts except that entries were started from the bottom of the shaft instead of from the river bank. As the loaded colliery cars came back to the bottom of the shaft they were pushed one at a time on to an elevator platform and were carried to the top of the shaft, 91 m, in 20 seconds.

A large quantity of machinery was used in connection with the colliery, including several 60 and 100 HP steam engines with boilers, hoisting drums, and cages. A smaller engine was used to pump water out of the shafts. Legg mining machinery was used to undercut the face, after

which miners shot down the coal with black powder and loaded it on to mine cars. Legg cutting machines operated on compressed air brought in from a compressor at the head of the Incline.

It is not generally known that the Galt company set up the town's first waterworks system in 1883. It was designed to wash coal from the drift mines but, in 1885, a pipeline was run up the coulee hill to a water tank at the roundhouse. The line was then extended to a hydrant at the corner of 1st St and 1st Ave S. Horse-drawn 2275-L water tanks loaded up here and their drivers filled barrels at all homes and businesses. Also nine underground 68.2-m³ water reservoirs were built in the downtown area for fire fighting purposes. The company water line eventually was extended to Galt No. 3 Mine. It was replaced by the modern civic waterworks, opened on 1 January 1905.

The company produced 20 865 tonnes of coal in 1885, its first year of operation with a transport system in place. In 1893, output was 726 tonnes a day or 145 149 tonnes for the season, for all of which there was ready sale. The Galt seam being worked at Lethbridge contained 20 180 tonnes of coal under each hectare. About half could be extracted, the rest was left as supports for the main galleries and as waste. About 101 ha had been worked out by 1893.



William Stafford, Senior

domestic coal producing centre in Alberta. The building of the CPR Viaduct (now the CP Rail High Level Bridge) over the Belly River opened up a large coal area north and west of the river. This set the stage for expansion of collieries at what is now Coalhurst and Diamond City and at the former village of Commerce, and the eventual opening of smaller mines such as the Taylor and Federal Mines. In addition, a large number of bore holes were put down and large acreages of coal lands were proved.

It was unlikely that coal miners saw it as the beginning of the end of their way of life. But in July 1912 The Canadian Western Natural Gas, Light, Heat and Power Company Limited began laying natural gas mains in the city, the actual hook-up to homes taking place in October. Many citizens resisted switching from coal to gas as coal mining was Lethbridge's main industry. Veteran newspaperman Harold G. Long said years later that he shovelled coal for a couple of years after gas arrived before taking the plunge to the new fuel. Long noted that it took coal miners a couple of decades before they began to follow the trend because it made them feel like traitors.

It soon became apparent that mechanized methods must supersede the older methods of hand loading and the use of horses for intermediate haulage of coal underground. William D. L. Hardie began the process locally by installing endless rope haulage in Galt Mine No. 3. The Standard Mine, developed by Christopher Storrar Donaldson in 1927 at what later became Shaughnessy, was a leader in the process of converting to electricity from compressed air. It was the first fully electrified coal mine in the Lethbridge area. By the mid-1940s conveyors of the shaker type, equipped with self-loading heads, were being used for loading the coal. Horse haulage had been outmoded by the use of 610-m belt conveyors for

The Galt Companies

Sir Alexander Tilloch Galt and Elliott Torrance Galt built 355 miles (571 km) of narrow gauge railway and 150 miles (241 km) of irrigation canals throughout southern Alberta and developed coal mines with a daily capacity of 2,000 tons (1815 tonnes). In all, the Galts formed eight companies in connection with their southern Alberta enterprises. It would have been easy to secure legislation to extend the life of any of them but shareholders would not take on additional responsibilities.

The companies were: North Western Coal & Navigation Company, Limited, formed in 1882, absorbed by the Alberta Railway & Coal Company in 1889; Alberta Railway & Coal Company, formed in 1884, absorbed by the Alberta Railway & Irrigation Company in 1904; Lethbridge Land Company, Limited, formed in 1888, absorbed by the AR&ICo in 1904; Alberta Irrigation Company, formed 1893, reorganized as the Canadian North-West Irrigation Company in 1899, absorbed by the AR&ICo in 1904; Great Falls and Canada Railway Company, formed in 1889 to build the Sweetgrass-Great Falls portion of a narrow gauge railway, sold to J. J. Hill of the Great Northern Railway in 1901; St. Mary's River Railway Company, formed in 1898, absorbed by the AR&ICo in 1904; and the Alberta Railway & Irrigation Company, formed by amalgamation of all previous Galt companies on 1 October 1904. It was known for a time as "The Group" but became best known by its initials, "The AR&I."

The AR&I company was purchased outright, partly by conveyance and partly by 999-year lease, by the Canadian Pacific Railway on 1 January 1912. (The CPR retained the corporate name, Alberta Railway & Irrigation Company, which is still listed on land titles as owning mineral rights to a large area of southern Alberta.)

The Montana and Canadian Railway Company was mentioned frequently around 1888 when a line from Lethbridge to Fort Benton was proposed. The company was never incorporated. [According to a 12 December 1888 Lethbridge News report, Elliott Galt had raised money in England to transform the Dunmore narrow gauge road to a broad or standard gauge road and, at the same time, to extend the railway to Fort Benton, Montana, to connect with the Northern Pacific, which had reached Benton in 1887. This was the source of the rumors about the establishing of a new company. The railway to Benton was never built although a narrow gauge line was extended to Great Falls in 1890. It was all part of an effort to open new markets for Lethbridge coal.]

The Montana section of the 1890 narrow gauge had cost the Galts about \$2.0 million to build. It was purchased by J. J. Hill for \$750,000.



Robert Livingstone

ducers of sulfur dioxide in North America.) Acid rain, at an average pH of 4.2, has since the 1960s caused acidification of 100,000 eastern Canadian lakes--about one in seven of all lakes east of Manitoba--and a massive decline in the vitality of eastern forests. Unfortunately transportation costs to Ontario increase the price of western coal by 50 percent. The federal government committed \$27 million from a \$1-billion Western Diversification Fund to help make western coal more competitive.

At time of writing coal goes east each week in unit trains from the Coal Valley area's Luscar Sterco mine, which has a contract with Ontario Hydro.

There was a flurry of local interest in coal again in the 1980s. The world price of oil had increased about 20X from its 1970 price of US\$1.80 a barrel and this had caused countries such as Japan to look elsewhere than the Middle East for assured supplies of energy. Coal was such a product and Canada was a politically-stable producer. Thus Canadian coal production increased from 8.2 million tonnes in 1969 to 33.6 million tonnes in 1979 and was projected to reach 37.2 million tonnes in 1981.

In April 1980, Petro-Canada Ltd. undertook to open an experimental mine near Kipp in Sec 30, Twp 9, Rge 22 and to obtain a sample of coal for testing in Japan and other Pacific Rim countries. A 250-tonne sample was shipped in December. Expectations were that, if agreements could be reached with prospective customers, by about 1984 the company would develop a mine to cost \$100 million and to employ 300 persons. Over \$5.0 million was expended for a concrete shaft, now covered over.

On 26 May 1981, Fording Coal Ltd., the coal mining

arm of CP Investments Limited, and Idemitsu Kosan Co. Ltd. of Japan announced their intention to open an underground thermal coal mine near Shaughnessy. The price of thermal coal had tripled since 1979, to around \$70 per tonne, thus making the project feasible. According to

The Livingstones

Coal mining was in the Livingstone's blood. Members of the family were coal miners in Fife, Lanark and West Lothian, Scotland, for at least four generations before emigrating to Petersburg, Ohio, where they operated a coal mine. The first generation of Lethbridge Livingstones was born there and, in order of age, were John, James and Robert. They grew up with coal mining and constituted the fifth generation so employed.

The brothers were prompted to come to Lethbridge because of their association in coal mining in Tennessee with their cousin, William Duncan Livingstone Hardie, called WDL, who preceded them to Lethbridge. He was manager of the Alberta Railway and Coal Company mines in the Lethbridge Field.

John, the eldest, was known to his fellow workers as Big Jack. He came to Lethbridge in 1896 as an official with the Alberta Railway & Coal Company. With his family, he spent one year in Beaver Mines where he and the late Bill Ripley opened the Christie Mine for the Great Northern Railway. The John Livingstone family lived for the entire year in a tent, John's wife, Elsie, being the cook for the mining crew. He then returned to Lethbridge and was pit boss at the Galt mines until his death in 1931. He was a member of Wesley Methodist Church, North Star Lodge No. 4 A. F. & A. M. [Ancient Free and Accepted Masons], and the Shrine Club [officially The Ancient Arabic Order of Nobles of the Mystic Shrine, or Shriners].

James, or Jim, as he was known, spent 40 years in the coal mines at Lethbridge. He came in 1897 and was associated with the Galt mines as hoisting engineer, master mechanic and later as surface foreman at Galt Mines Nos. 6 and 8. Jim was a member of Southminster United Church [formerly Wesley Methodist Church] and the North Star Lodge No. 4 A. F. & A. M.

Robert, the youngest, was a mining engineer. He worked in Ohio, Tennessee and Kentucky before coming to Lethbridge in 1895 where he became underground foreman of Galt Mine No. 3 and later at Galt Mine No. 6, when he left to work with the Alberta government. He served in turn as district mines inspector at Lethbridge and Calgary, and later as chief inspector of mines at Edmonton. He left that post in 1910 to return to Lethbridge as manager of the Galt mines. When the field merger took place at Lethbridge in spring 1935, resulting in the formation of Lethbridge Collieries Ltd., Livingstone was appointed general manager, a post he held until his retirement in 1938.

transporting coal from the shaker conveyors to the main haulage. The goal was to see all coal removed by mechanical means. Locally, these machines were introduced into Galt Mine No. 8 as part of an experiment. It was only moderately successful and soon abandoned at No. 8 due to the tenderness of the roof and the large amount of labor required to move the units.

Coal Lands

1. The following districts have been set apart and the lands therein withdrawn from ordinary sale and from settlement, and declared to be coal districts, the same to be known as those of the Souris river, the Bow river, the Belly river, and the Saskatchewan river, the said districts for the present to be composed as follows:

[Districts I. - Souris River Coal District, II. - Bow River Coal District, and IV. - Saskatchewan River Coal District, are listed and their land areas indicated.] III. - Belly River Coal District Townships 8, 9, 10, ranges 21, 22, 23, west of fourth meridian.

2. The land within the said coal districts will be surveyed as soon as possible, and thereafter will be periodically offered for sale by tender or public auction, at an upset price; the same, together with the terms and conditions of the sale, to be fixed from time to time by the Minister of the Interior.

3. With respect to leases which have already been granted, each lessee who has fulfilled the conditions thereof may, within two years from the date of the order-in-council authorizing his lease, convert the leasehold into freehold by paying in cash the upset price placed by the Minister of the Interior on the lands in the coal district wherein the said leasehold is situated; but the lease shall be null and void in all cases where the conditions have not been fulfilled by the lessee, especially the conditions contained in Clause 5 of the said regulations, which is as follows: "That failure to commence active operations within one year, and to work the mine within two years of the commencement of the term of the lease, or to pay the ground rent or royalty, shall subject the lessee to forfeiture of the lease and resumption of the land by the Crown."

4. In cases where the Minister of the Interior satisfies himself that companies, or persons, have expended considerable sums of money in exploring for coal within the limit of any district for which they may have applied under the regulations of the 17th December 1881, the said lands may be sold to such companies or persons at the upset price fixed for lands in the coal district in which such tract may be situated.

5. The boundaries beneath the surface of coal mining locations shall be the vertical planes or lines in which their surface boundaries lie.

6. The rights of lessees, and of persons in favor of whom orders-in-council have been passed, shall not be affected by these regulations, except in so far as they may be consistent therewith.

The Winnipeg Daily Times 19 October 1883

Sir Alexander Galt Museum



Charles Alexander Magrath

Lethbridge mines were desperate for men by 1915. In November of that year idle miners from British Columbia went to work at Coalhurst (Mine No. 0174). In May 1916 a contingent of Japanese miners arrived from the west coast in response to the heavy demand for coal and the shortage of labor. Efforts were made to secure the early release of miners from Canada's armed forces so they could return to work in the coal fields. In spite of all this, by August 1916 mines of the district were choked with orders and about 400 more men were needed, a condition that continued until the beginning of the post-Great War depression around 1919-20.

Coal production peaked in Lethbridge in 1919 when 2,000 men in ten major mines [a total of 19 mines were in operation] produced about one million tonnes of coal. The opening of the Drumheller coal field a few years earlier significantly affected the market once held by Lethbridge's collieries. Production declined fairly steadily until 1964 when, as a consequence of an ill-advised strike by workers at the Standard Mine at Shaughnessy, the local coal mining industry collapsed. For a brief period during the Second World War, 600 men in four major mines [a total of 14 to 16 mines were in operation] produced about one-half million tonnes of coal per year, an increase over the one-third million-tonne annual average during the depression years. Nevertheless, in 1939, miners worked only 25 per-

a large mechanical pick which breaks into the bottom of the coal for a distance of about five feet [1.5 m] and enables the coal to be shot down and loaded with less explosives and with less breakage than if it be shot out of the solid.

While the mines of the district are not very "gassy," inflammable gas is found in some of them. In these mines the miners use electric lamps, and the mines are kept clear of gas by means of large centrifugal fans situated on the surface. Very large quantities of air are required to properly ventilate the extensive mines in this field, and the cost of maintaining adequate ventilation is considerable. The largest of the fans in the district blows over 200,000 cubic feet [5600 m³] of air per minute through the mine. It will be realized that the power required to drive such a fan is considerable when it is considered that this quantity represents over 9,000 tons [8182 tonnes] of air every 24 hours.

The mines are equipped with up-to-date appliances for properly screening and preparing the coal for the market so as to produce the best possible product. The coal is screened into various market sizes varying from lump coal over a four-inch screen [10 cm] to slack through a three-eighths [1.0 cm] screen. The larger sizes are transported along slowly-moving belts on the tippie where all impurities are picked out by hand. The smaller sizes are cleaned mechanically by what are known as spiral separators. These machines were first developed in the Pennsylvania anthracite field where they were used to clean the smaller sizes of anthracite.

They were tried out in this field in 1919 and were found to give equally good results with this coal. The coal to be cleaned goes down spiral chutes which are set on an angle that is adjustable. It is found that owing to difference in the coefficients of friction of coal and iron and rock and iron the coal travels faster down the chute than the rock and, due to centrifugal force, tends to make its way to the outside of the spiral while the rock remains on the inside. In this way a very fine separation of coal and rock is made, giving a very clean product for the market.

By Joseph B. deHart, M. Sc.
The Lethbridge *Daily Herald* 18 July 1928

Nothing is known of the first operation except that Perry ceased operations in May 1908. Reece opened the mine on 3 February but closed it from 30 August to 1 October as demand for coal was very soft. He reopened the mine on 25 October but closed again on 13 March 1921 and abandoned the property.

The Old Fort Mine was located about 11 km south of the known location of Fort Whoop-Up. Archaeologists have long suspected that a heretofore unknown whiskey trading post was once located in the vicinity of the mine and have shown renewed interest in the site.

The mine serves as an example of a number of small mines, particularly south of Lethbridge, that survived for

brief periods (sometimes for surprisingly long periods) on intermittent production from relatively thin seams (0.9 m in thickness) for localized consumption. On 29 January 1926 one such mine operator got a contract from River Junction School board to supply coal for \$11 per two-tonne load to be delivered as required. They were sometimes called "wagon mines." These small operations were not well equipped, as a rule, and depended on "picks, powder and elbow grease."

A popular term for such mines was "gopher hole mines." Glen F. Hamilton with his father, James F. Hamilton, surveyed many of these small mines. Mr. Hamilton told us that a lot of them had as little as 1.1 m of headroom and it was necessary to go into them on one's hands and knees. The Hamiltons had to set up their surveying instruments before going into these mines to ensure that the tripod was no more than about a metre high. It was no place for those with claustrophobia.

The Ethnic Mix

During the First World War, forms were issued to the coal companies and they were asked to keep track of the ethnic origin of their employees and whether or not they were naturalized British subjects. [Officially, there was no such thing as a Canadian in those days, and, in fact, until well into the Second World War we were all Scotch-Canadian, Swedish-Canadian and so on. Yet for some reason, "Canadians" are listed below.]

Here is the make-up of the work force in the Chinook Company, Limited, mine at Commerce and the North American Collieries Mine at Coalhurst in April 1918:

	Commerce	Coalhurst
Canadian	9	66
English	24	54
Scotch	10	29
Irish	1	3
Hindu	-	1
Other British Possessions	-	2
Welsh	2	2
French	3	5
Belgian	1	-
Roumanian	3	-
American	8	8
Russian	1	6
Austrian	46	170
German	1	17
Swedish	1	3
Norwegian	1	-
Italian	43	29
Hungarian	11	-
Total	166	366

Other nationalities listed included Australian, Serbian, Greek, Danish, Portugese, Dutch, Spanish, Montenegrin, Turkish, Armenian, Mexican, Chinese, and Japanese. In addition, there was space at the bottom of the form and a note: "Add to the list of nationalities any which are not mentioned."

John Marshall Davidson

John Marshall Davidson was born in New Battle, Scotland, on 10 September 1898 and went to work in the coal pits at age 14. He enlisted in the Royal Engineers at age 17 and soon found himself commissioned as a lieutenant with a tunnelling company. Upon discharge in 1918, the 20-year old officer attended Edinburgh University where, in 1922, he graduated as a mining engineer.

His first job was to survey and help to open mines on the island of Spitzbergen--mines, ironically, that were blown up by Canadian troops when the island was occupied by Germans in the Second World War.

Davidson returned to the collieries at Arniston, where he had started his mining career, but this time as a section overman. He worked on the evening shift, teaching mining to second-year university students during the day. In July 1924 he decided to leave Scotland and to seek employment in Canadian metal mines.

He travelled directly to Edmonton but his plans to work in a metal mine did not materialize. Instead, he was forced by economic necessity to dig coal at the face for the Black Diamond Coal Company of Edmonton.

His qualifications--a university degree and a first class mine manager's certificate from Great Britain--did not go unnoticed. In May he was made mine manager. Two years later he was transferred to the Jasper Coal Company mine at Drinnan, also as mine manager. In 1933, R. G. Drinnan, consulting engineer for North American Collieries, which operated the mine at Coalhurst, induced Davidson to come to Coalhurst as mine manager there. He remained in charge after the Coalhurst property was taken over by Lethbridge Collieries Ltd. in 1935. He was made mine manager at Galt Mine No. 8 when it was brought into production in spring 1936. He became general manager of Lethbridge Collieries Ltd. on 31 March 1946, upon the retirement of Chris S. Donaldson.

Davidson had impressive credentials. He had a B.Sc. in mining engineering from Heriot-Watt College of Edinburgh University, a British first class mine manager's certificate, and a first class mine manager's certificate from the Province of Alberta. He was a member of the Mining Engineers of Great Britain, the Canadian Institute of Mining and Metallurgy, the Engineering Institute of Canada, and the Professional Engineers of Alberta.

long associated with coal mining in Lethbridge (as his father and two uncles had been before him), is quoted below:

"The Lethbridge coal field lies mostly to the west and north of the City of Lethbridge. Mining was carried on in this area for over eighty years until 1965. The single, almost flat, worked seam is designated the 'Galt' seam and is about 1.5 m thick. It belongs to the Belly River formation and is under cover of 80 to 180 m of weakly stratified sediments. A complex system of cross faults adds to the mining difficulties. Close timbering required in the entries and rooms was reflected in a high timber cost and lower output per man shift. The coal is High Volatile 'C' bituminous in rank, with a well defined cleavage. Roof conditions in the field range from very tender and very heavy on the south end of the field and west of the Oldman River to a more stable character to the north. Relatively speaking, the whole field would earn a rather tender rating and definitely so in relation to many U. S. fields. Floor conditions are characterized by a bentonitic-type heaving in the south end of the field west of the Oldman River to a more stable condition in the north, which can tolerate shuttle car operation if kept drained. Water problems are minimal, except paralleling the Oldman River, where the seam dips below the river level. While vigilance is necessary to prevent accumulation of gas, the volume is rather limited.

"The seam is entered by shaft, except where small mines were located along the Oldman River banks and access gained by drift or slope. The coal seam was developed by driving either 3 or 4 Face entries 2.5 m wide on 18 m centres. Sets of dual butt entries driven at right angles to the Face entries completed development work. Normally rooms up to 8 m wide were turned off the butt entries on up to 11 m centres. These were worked in groups of three to five, depending on the roof conditions, and nor-

mally advanced 60 m. In some areas rooms had to be abandoned short of their objectives due to roof pressure, heaving floor and intermittent work.

"The nature of the prevailing domestic market wherein 10 cm 'lump' coal fetched three times the price of 2.5 cm 'slack' coal severely limited the type of mining equipment used. So sensitive was the profitability of the mine to the size of coal produced that Cardox and later Airdox was used in the shooting process to maintain maximum size product.

"Prior to the closure of the last mine [Galt Mine No. 10 at Shaughnessy], a mechanization program was initiated. Under this program, the coal was undercut and centre sheared by track-mounted universal machines and loaded by gathering-arm type loaders. Shuttle cars, belts, and mine cars hauled by battery and trolley locomotives were utilized for haulage to the pit bottom.

"Some roof bolting experiments were carried on in the field. These utilized the early types of bolts, but early closure of the mine prevented definitive results being obtained.

"In an effort to maximize mechanization and still maintain product size, earlier experiments were conducted on removal of 80 m blocks of coal by taking 2 m skips, using a shaker conveyor with a 45-degree swivel. This method gave way to the final mechanization program due to excessive heavy manual labor required.

"In light of the difficult strata conditions in some areas and the product-size demands of the market, the perseverance of the largest producer [Mine No. 1263] to mechanize the operation was commendable. The productivity of this field was about 2.5 tonnes per man day, but this figure must be assessed in light of the severe limits on choice of equipment imposed by the market conditions."



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It soon became apparent that mechanized methods must supersede the older methods of hand loading and the use of horses for intermediate haulage of coal underground. William D. L. Hardie began the process locally by installing endless rope haulage in Galt Mine No. 3. The Standard Mine, developed by Christopher Storrar Donaldson in 1927 at what later became Shaughnessy, was a leader in the process of converting to electricity from compressed air. It was the first fully electrified coal mine in the Lethbridge area. By the mid-1940s conveyors of the shaker type, equipped with self-loading heads, were being used for loading the coal. Horse haulage had been outmoded by the use of 610-m belt conveyors for

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The companies were: North Western Coal & Navigation Company, Limited, formed in 1882, absorbed by the Alberta Railway & Coal Company in 1889; Alberta Railway & Coal Company, formed in 1884, absorbed by the Alberta Railway & Irrigation Company in 1904; Lethbridge Land Company, Limited, formed in 1888, absorbed by the AR&ICo in 1904; Alberta Irrigation Company, formed 1893, reorganized as the Canadian North-West Irrigation Company in 1899, absorbed by the AR&ICo in 1904; Great Falls and Canada Railway Company, formed in 1889 to build the Sweetgrass-Great Falls portion of a narrow gauge railway, sold to J. J. Hill of the Great Northern Railway in 1901; St. Mary's River Railway Company, formed in 1898, absorbed by the AR&ICo in 1904; and the Alberta Railway & Irrigation Company, formed by amalgamation of all previous Galt companies on 1 October 1904. It was known for a time as "The Group" but became best known by its initials, "The AR&I."

The AR&I company was purchased outright, partly by conveyance and partly by 999-year lease, by the Canadian Pacific Railway on 1 January 1912. (The CPR retained the corporate name, Alberta Railway & Irrigation Company, which is still listed on land titles as owning mineral rights to a large area of southern Alberta.)

The Montana and Canadian Railway Company was mentioned frequently around 1888 when a line from Lethbridge to Fort Benton was proposed. The company was never incorporated. [According to a 12 December 1888 Lethbridge News report, Elliott Galt had raised money in England to transform the Dunmore narrow gauge road to a broad or standard gauge road and, at the same time, to extend the railway to Fort Benton, Montana, to connect with the Northern Pacific, which had reached Benton in 1887. This was the source of the rumors about the establishing of a new company. The railway to Benton was never built although a narrow gauge line was extended to Great Falls in 1890. It was all part of an effort to open new markets for Lethbridge coal.]

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Gas in Lethbridge Coal Mines

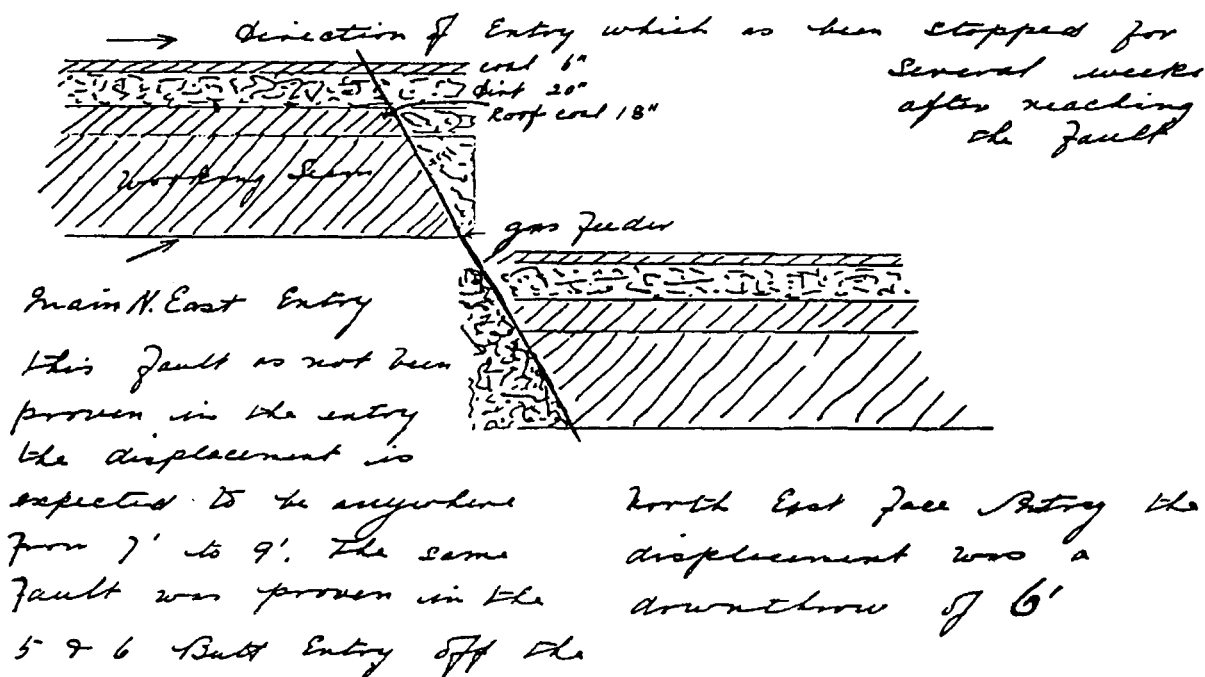
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The gas in coal mines is methane, also known as firedamp. It is a colorless, odorless, highly flammable gas, which can be explosive if mixed with air. Methane is the main constituent of natural gas. After-damp, the killer gas present in a mine after a fire or an explosion, is mostly nitrogen and carbon dioxide, with traces of free hydrogen and carbon monoxide.

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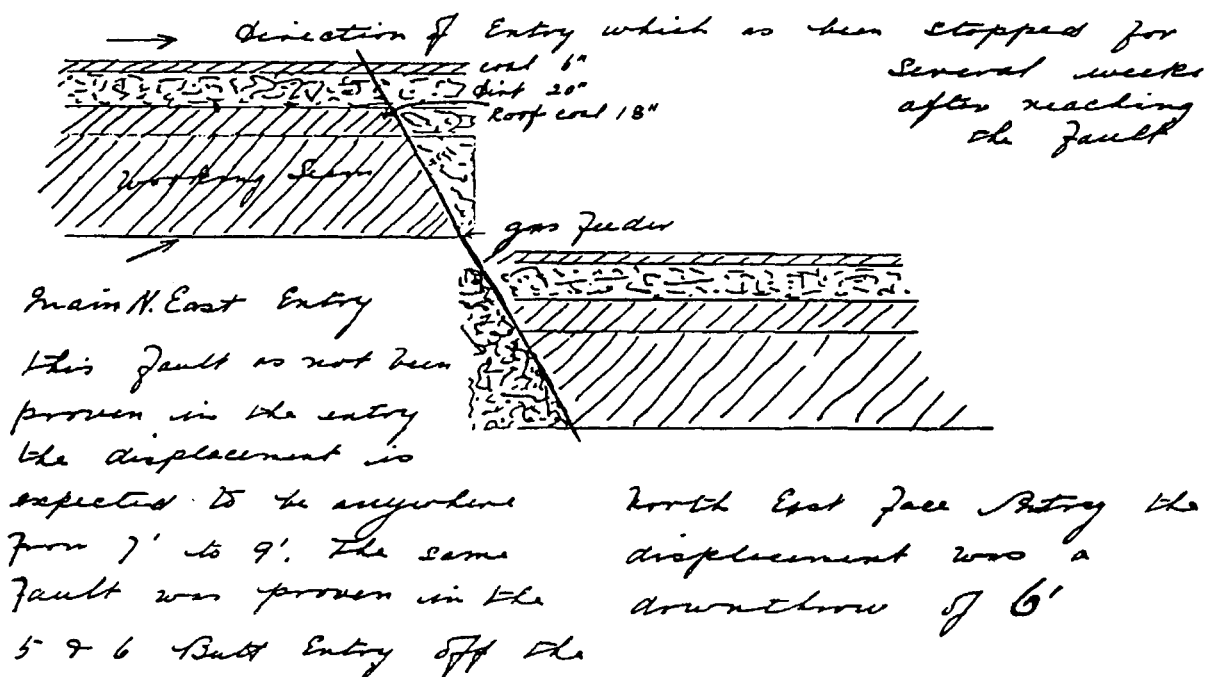
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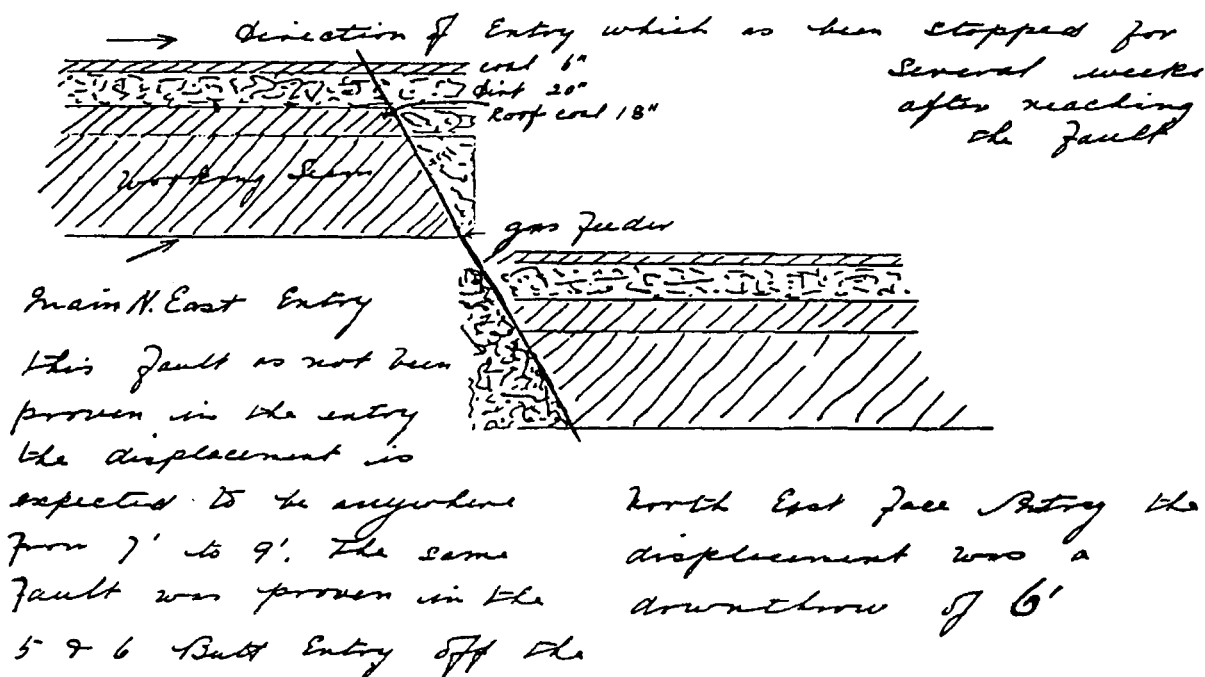
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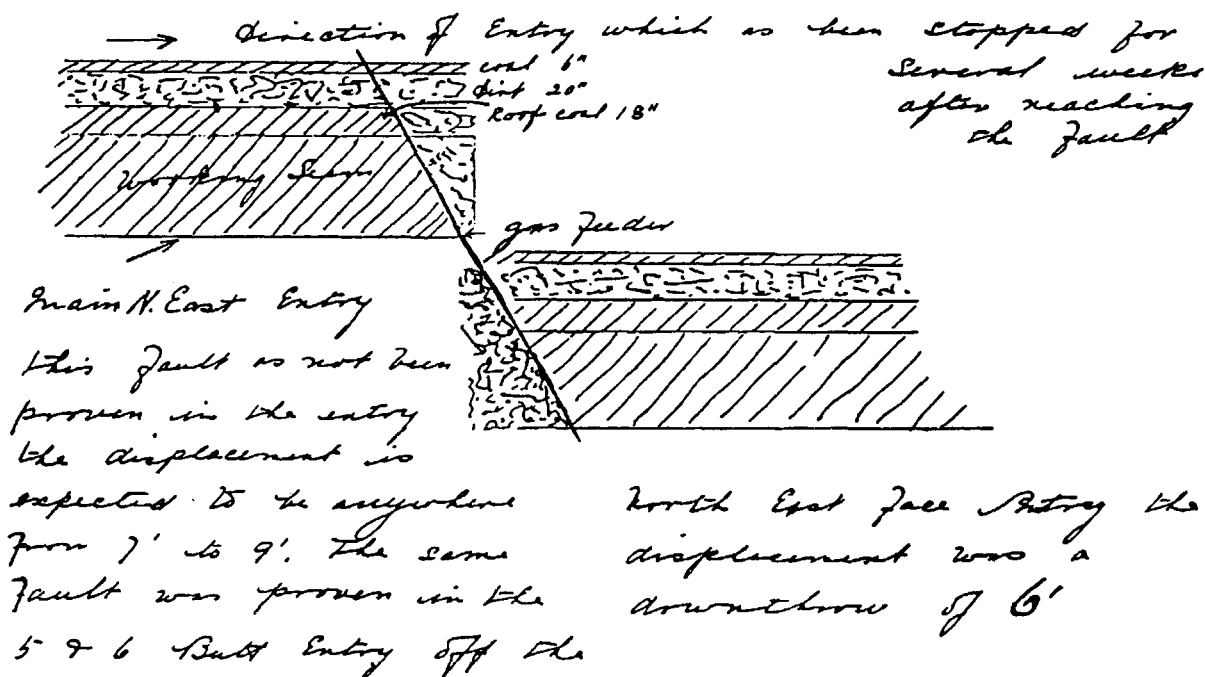
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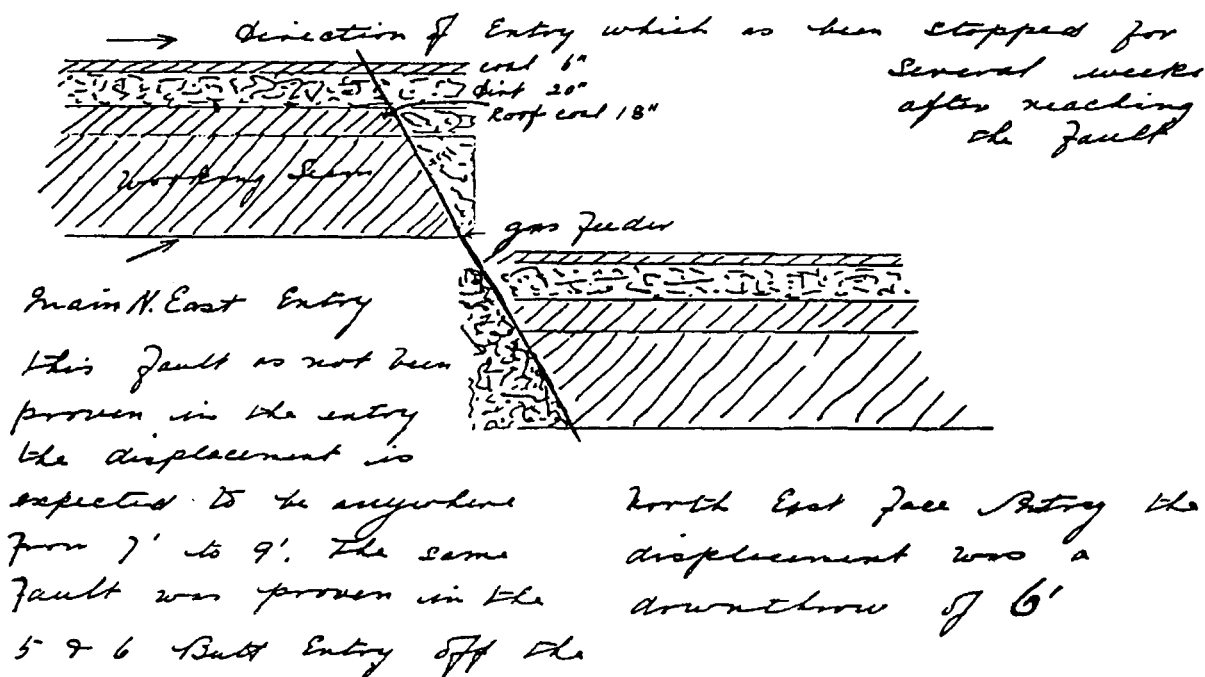
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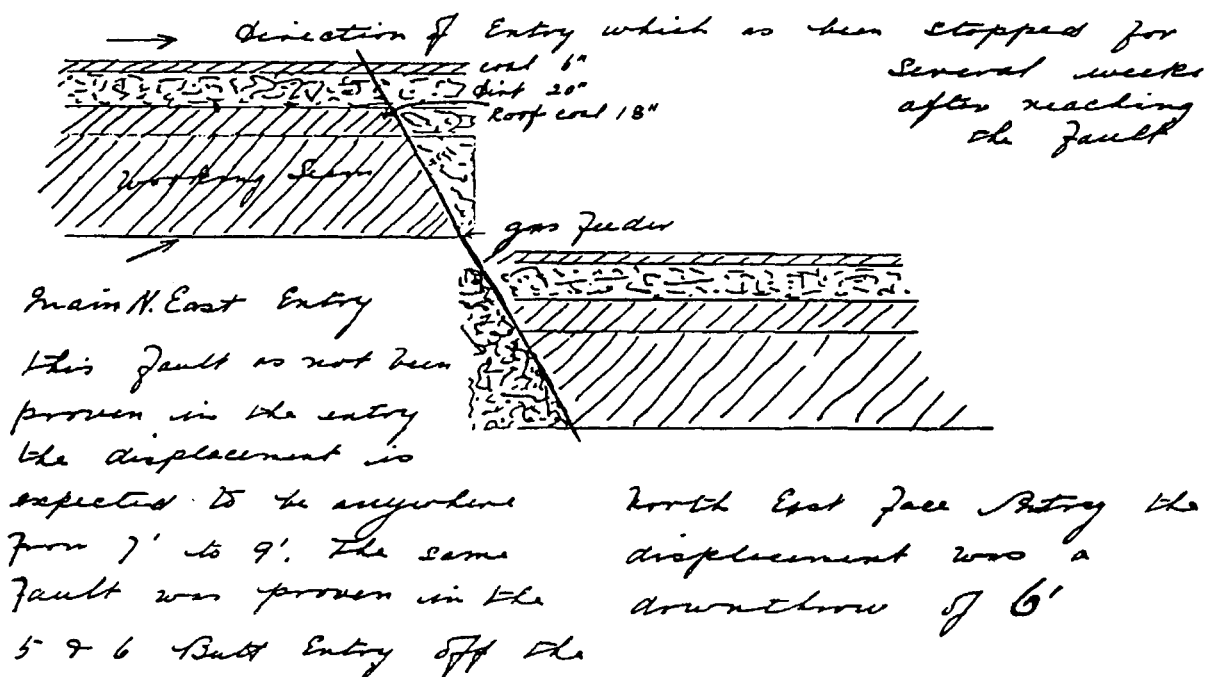
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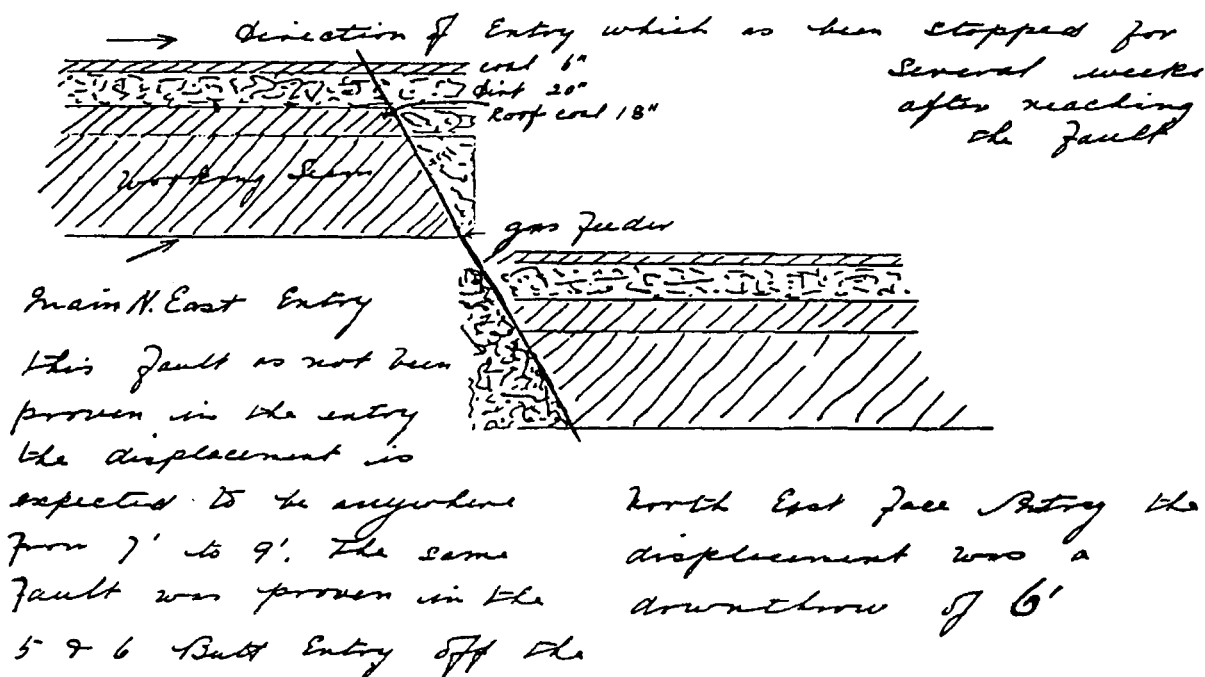
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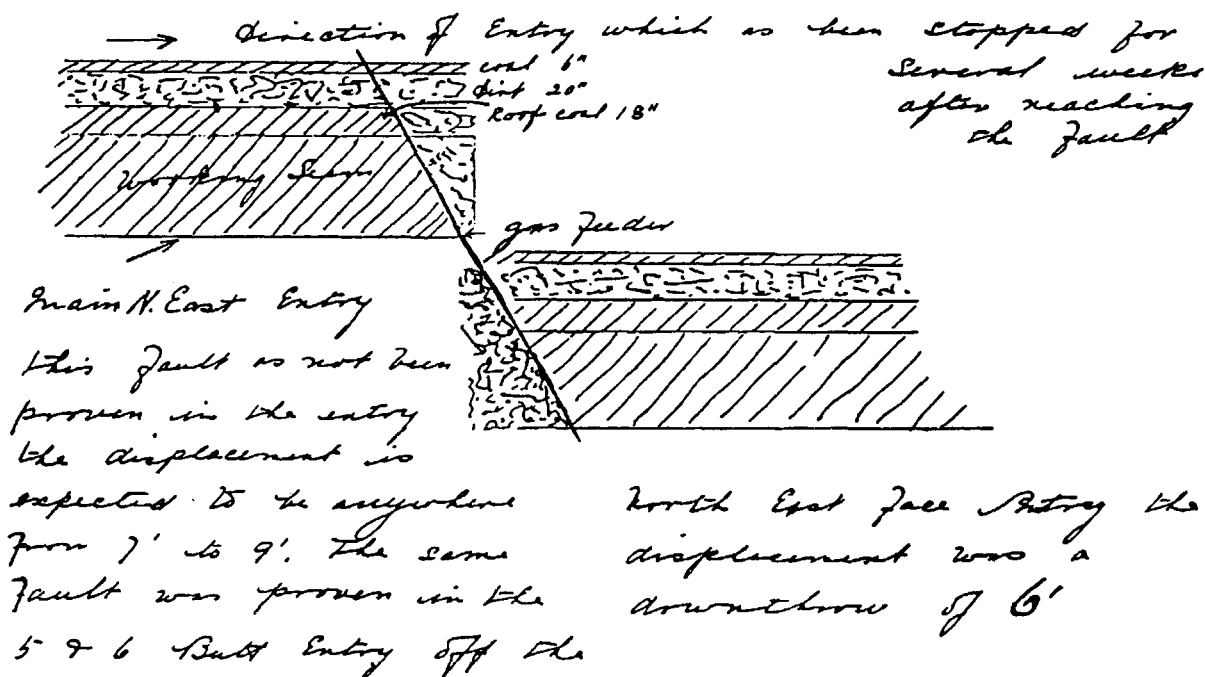
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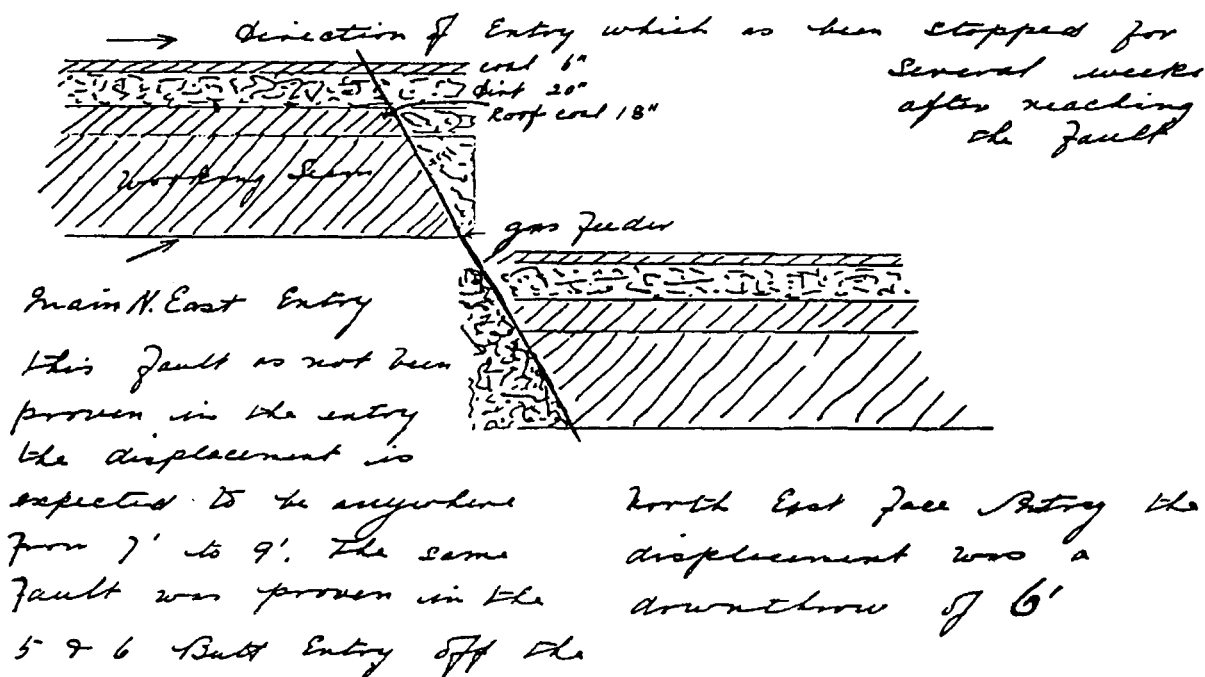
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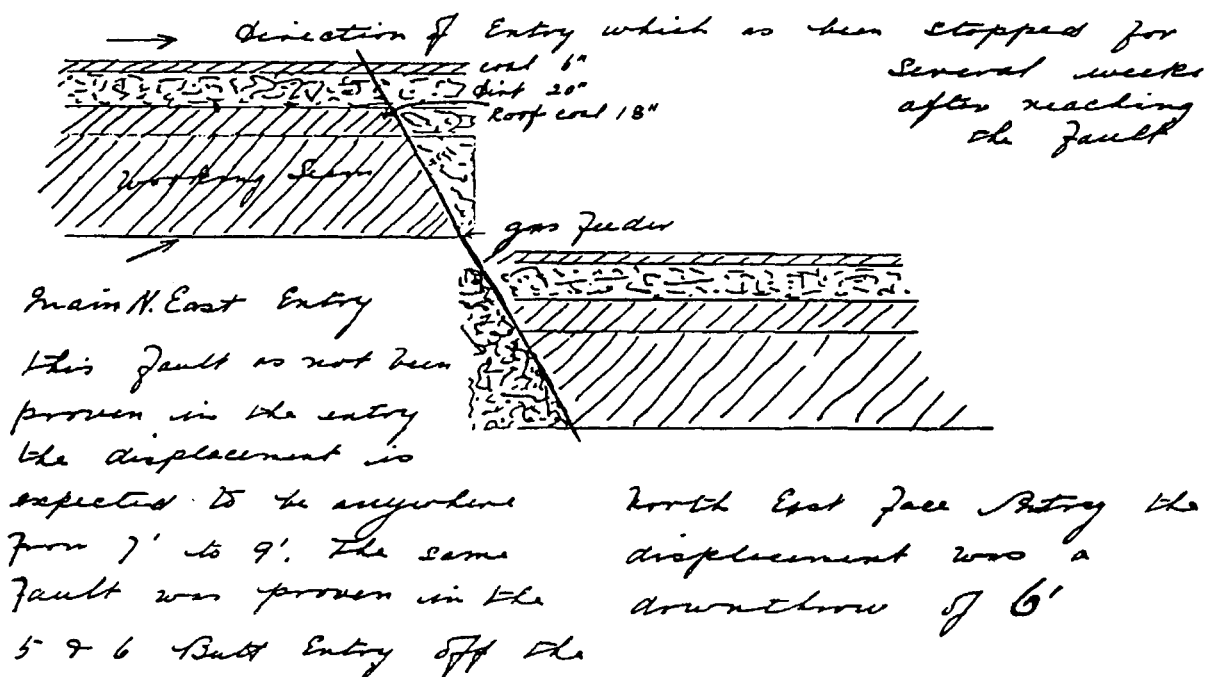
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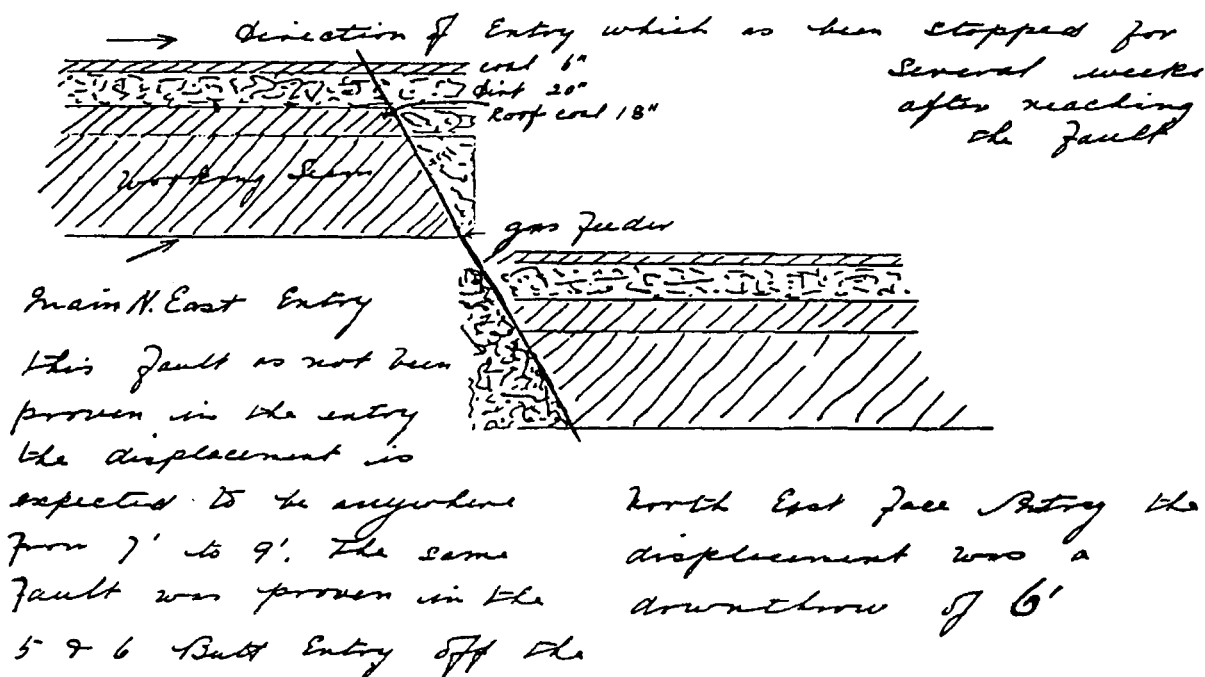
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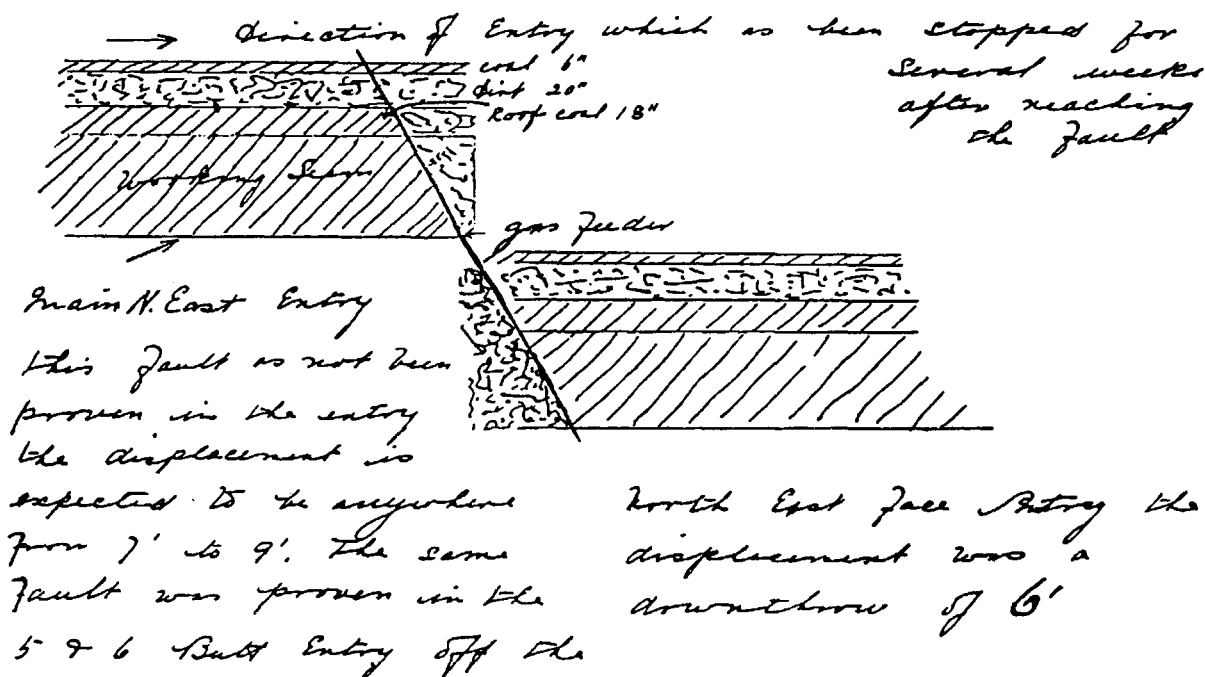
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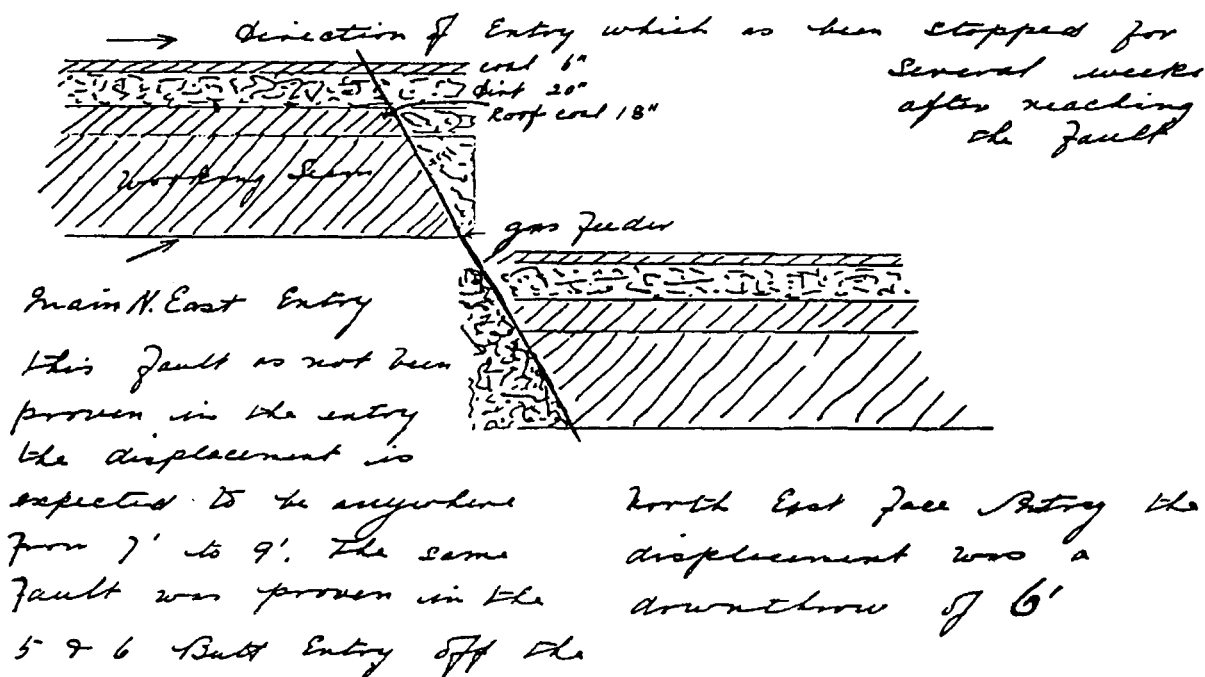
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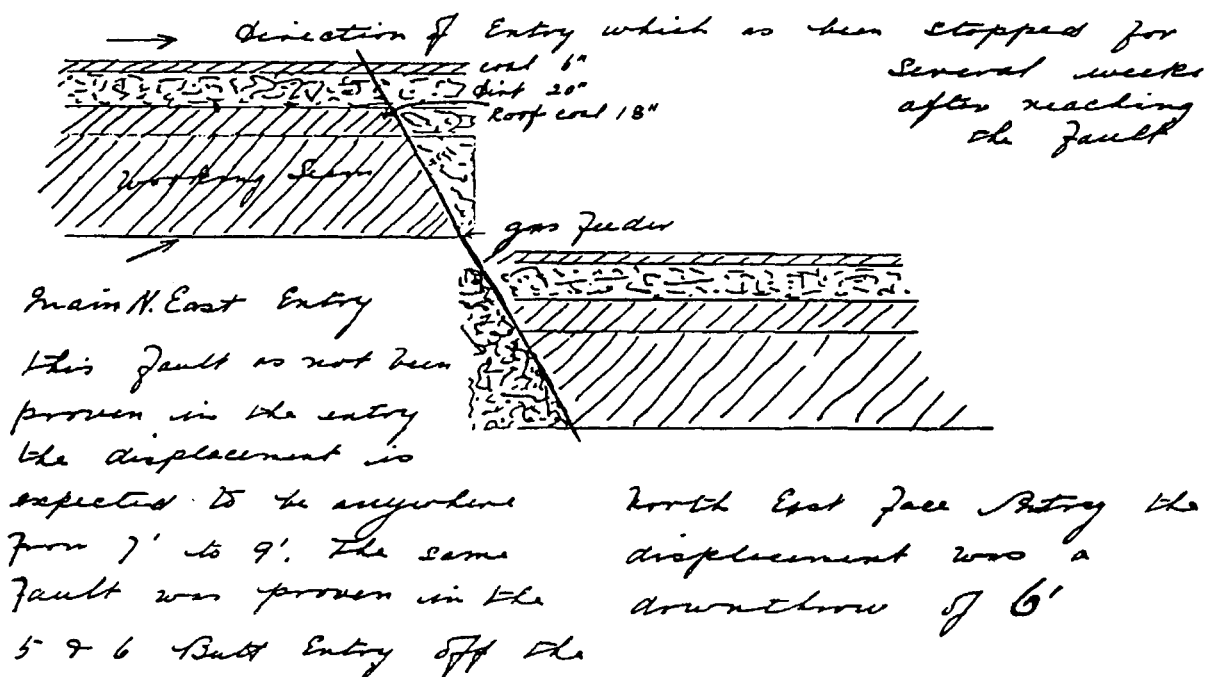
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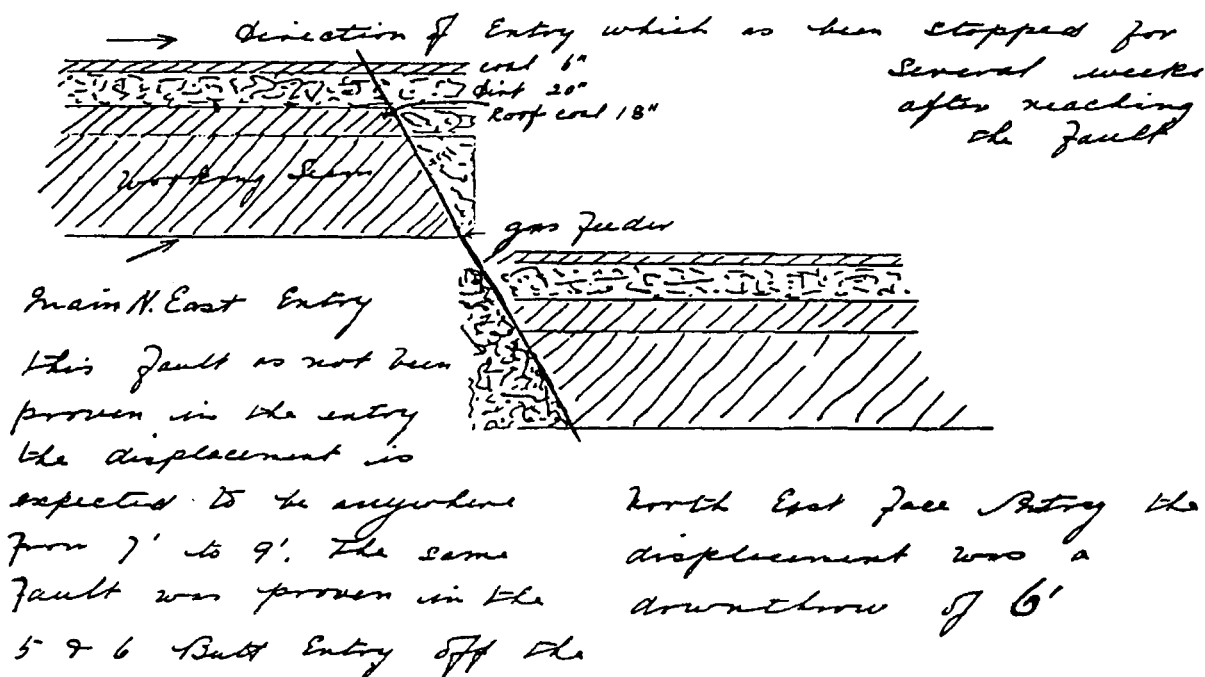
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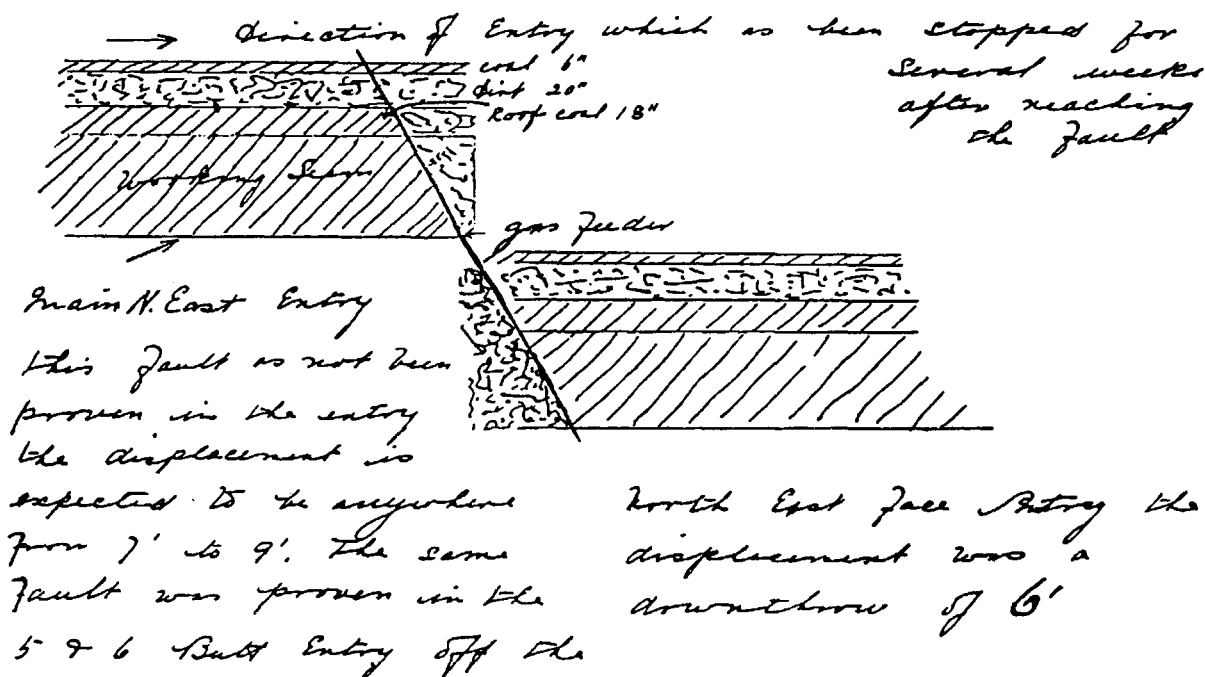
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The diagram below was prepared by a mine inspector in connection with his investigation of burns suffered by a workman at the Chinook Coal Company mine at Commerce. Gas from feeders near a fault had collected in a pocket on the ceiling. When the workman stood erect under the pocket the open flame from his miner's lamp ignited a small explosion. Safety lights were in use by 1911, at least in the larger mines, and lessened the problem.

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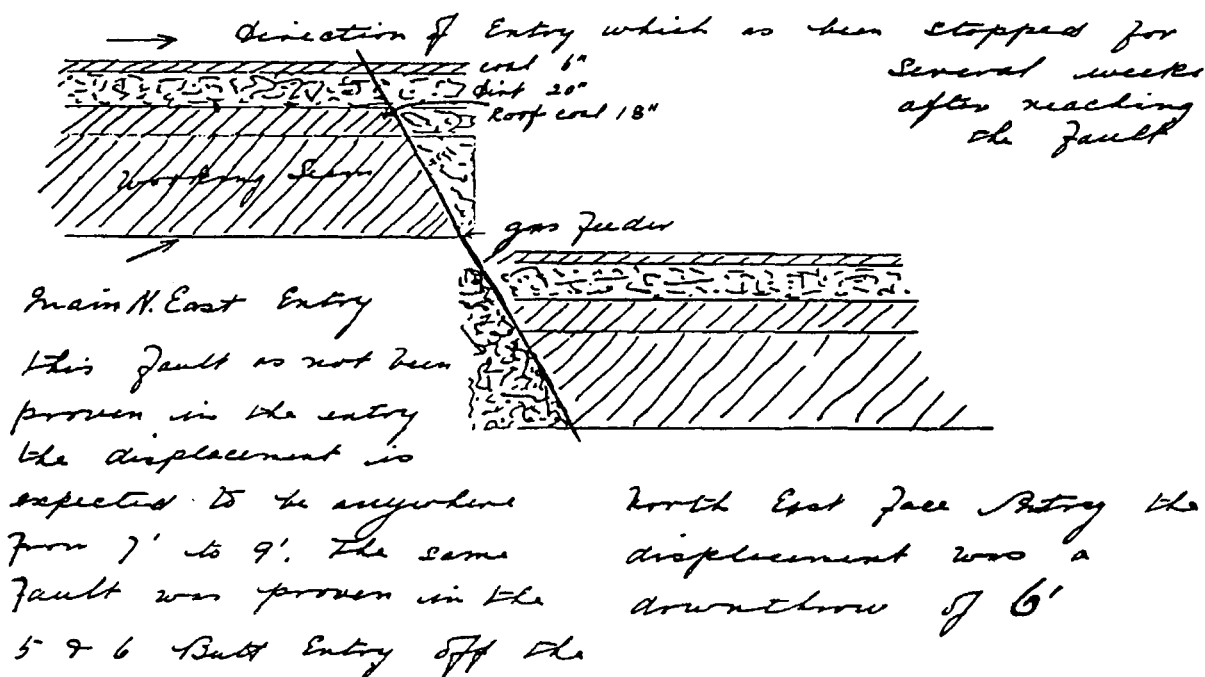
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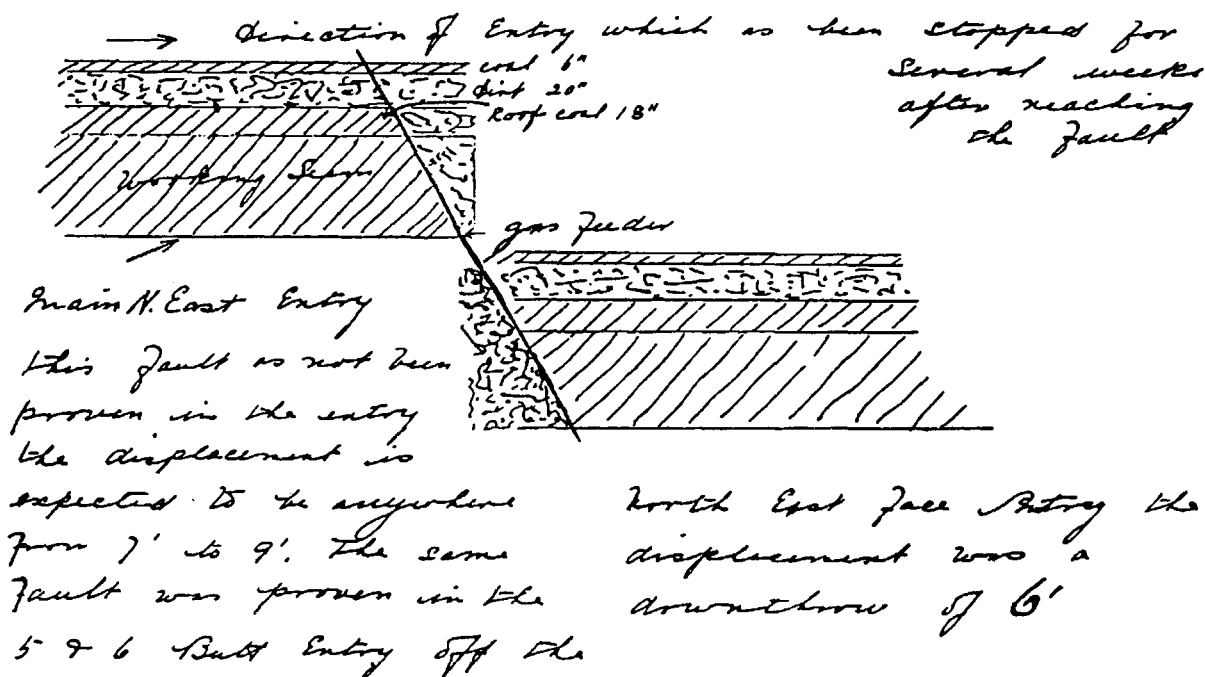
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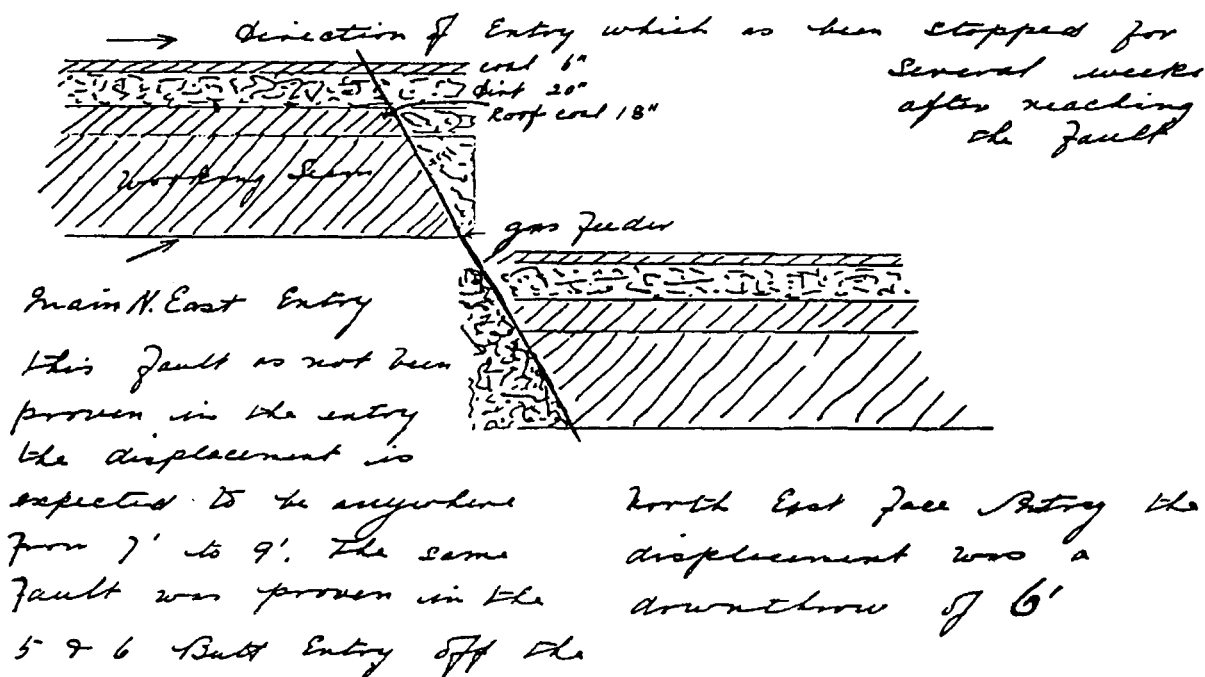
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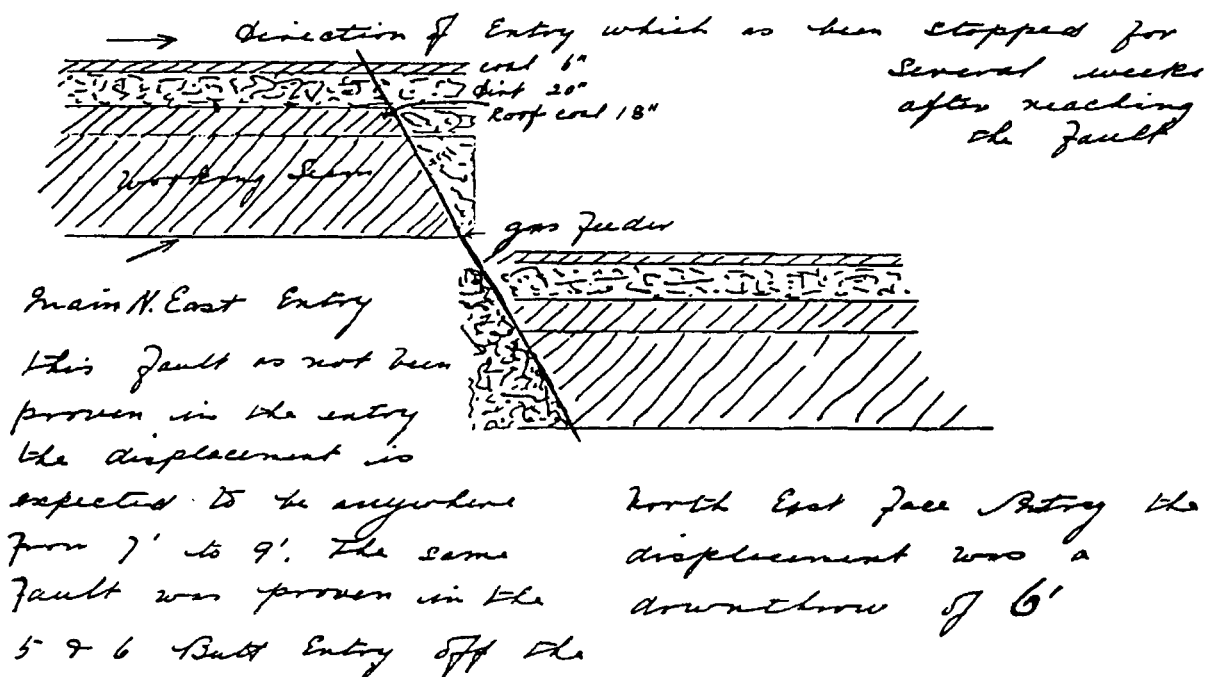
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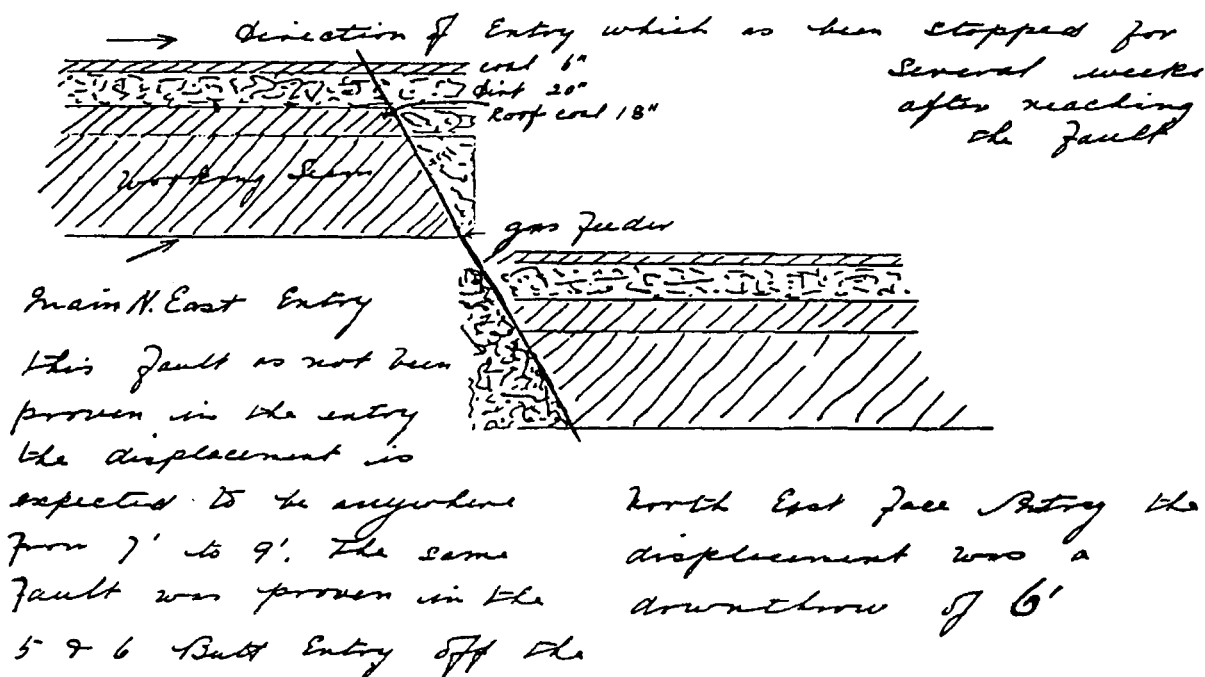
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Rise and Fall of the Coal Industry at Lethbridge

Resource industries are notoriously sensitive to market forces and the coal mines of the Lethbridge region were no exception. The primary Lethbridge market was always for domestic coal although it was used in CPR locomotives when the mines were first opened. Unlike steam coal, where users tended to be a few railways and industries with a constant demand, users of domestic coal consisted of thousands of householders drawing a heavy supply in winter for heating and cooking but a very limited supply in summer for cooking purposes only. Further, the domestic coal fields were tied to the agricultural economy of the prairies so that demand varied with crop conditions. Variable winter weather strongly influenced demand. The coal could not be stored in the open so mines had to operate on the basis of producing only sufficient coal to fill current orders.

This led to great fluctuations in demand with full employment for a few months followed by lengthy layoffs. When generally difficult labor relations, particularly in the early years, were added to strongly seasonal demand and a volatile market the potential for trouble was always present. Strikes became a frequent event, instigated by whichever side was in a position temporarily to exert economic pressure on the other.

[It should be pointed out that this referred mostly to the early years from about 1905 to 1930. Local miners were members of the United Mine Workers of America, the most powerful union in North America for decades. It was not until the 1930s that industry in general began to confront such union strength in, for example, the American Federation of Labor and the Congress of Industrial Organizations or AFL/CIO, and not until the 1950s that government began to do so in, for example, the small but militant Canadian Union of Postal Employees or CUPW. Thus, many people failed to understand the difficulties faced by early mine owners in negotiating wage-benefit contracts with a monolithic union such as the UMW. Strikes became less frequent as both parties learned from their mistakes and, eventually, long periods of relative labor peace began to characterize the industry.]

One of the most celebrated of these strikes was the miners' strike of 1906. Rising prices, a natural outgrowth of an overheated economy, caused considerable discontent among a large majority of Lethbridge's workers. In February, believing that their wages were not keeping pace with inflation, miners from the Galt and Ashcroft collieries sought to increase their earnings and decrease their working hours by forming Local 574 in District 18 of the United Mine Workers of America. Only a month later they presented the Alberta Railway & Irrigation Company with a list of demands. The company, under managing director Sir Augustus M. Nanton, rejected the demands out of hand and on 9 March 1906 the union called a strike. Initially the strike was peaceful but when the company hired 100 men to keep the mine open and several private detectives to spy on the strikers, the situation turned ugly. Several times during the summer angry miners and their wives attacked policemen protecting the strikebreakers; on two occasions explosives damaged the homes of employed workers.

By the end of the summer the strike had reached a stalemate and intervention was necessary to prevent a coal famine later that winter. Lethbridge's city council and its Board of Trade tried to arbitrate but met with little success as neither was trusted by labor. In November the Hon. W. R. Motherwell, Commissioner of Agriculture with the government of Saskatchewan, fearing a coal shortage, pressured the dominion government to act. The federal government was receptive to intervention because a coal famine would seriously hurt immigration to the prairies and would create much localized hardship. It sent its senior mediator, Deputy Minister of Labor William Lyon Mackenzie King, to find a settlement. King set up in the Lethbridge Hotel and, by alternately cajoling and bullying the workers, brought about an accord. King was helped by the absence of Nanton, who was at the Montreal bedside of his dying mother, and by being able to deal directly with Peter Lawrence Naismith, general manager, and William D. L. Hardie, mines manager, of the Galt interests in Lethbridge. The mines reopened on 6 December 1906.

[Oral tradition among mine officials of the region has it that a basis for settlement of the strike had been arrived at before Mackenzie King reached Lethbridge. Negotiators wired him at Winnipeg to return to Ottawa as he was not needed. However, Mackenzie King insisted on proceeding to Lethbridge to reap the political benefits and publicity that accompanied a settlement.]

The long and bitter strike provided workers with few immediate gains. The miners won a small wage increase and the right of collective bargaining, but because the company refused to collect union dues from the men's wages, they failed to gain union recognition. The disappointment left a bitter legacy: strikes varying in length from three to eight months occurred in 1909, 1911, 1919, 1922, 1923 and 1924.

Based on his experience at Lethbridge, Mackenzie King in 1907 drafted, and Parliament enacted into law, The Industrial Disputes Investigation Act, long a model of labor conciliation legislation. A Royal Commission, chaired by Arthur L. Sifton, was set up to study the coal mining industry in the Province of Alberta. Partially as a result, the Alberta government in 1907 passed its first Workman's Compensation Act. And in 1908, the government legislated the eight-hour day, popularly known as "The Eight-Hour Law," long an objective of labor. The law became effective on 1 April 1909. [On 10 June 1943, the five-day work week began to be seriously discussed as a post-Second World War objective by local coal miners.]

Nevertheless, in spite of strikes and other problems, coal mining played an important part in the economy of Lethbridge, particularly in the early decades of the century. The excellent quality of Lethbridge coal as a domestic fuel was widely recognized and the Galt logo, a shield on which was written in black and red "Galt Coal: Burns All Night," was known to consumers across the four western provinces and in several adjoining states. One of us (AJ) was raised in a coal stove-heated farm home in southwestern Saskatchewan and can attest that Galt coal did indeed "burn all night."

By 1909 the Lethbridge district was the largest single

Robert Naysmith

Robert Naysmith passed away in the Van Haarlem Hospital, Lethbridge, on 5 July 1924. Only a few months earlier, on 18 March, he had been the last to ascend from the now-closed Galt No. 3 Mine where he had worked since 1897. Work had begun on the mine in 1890, it had opened in 1892, and full-scale development got underway in 1897 when W. D. L. Hardie became manager.

Naysmith was born in a little village in the Lothians on 3 July 1849. He went to work in the mines there at age 12. He emigrated from Scotland to the United States in 1888, worked briefly in Connecticut, then came to Lethbridge on 17 March 1889. Two days later he obtained work in what was then Drift Mine No. 7 in the riverbottom. From there he went to Galt No. 1 mine shaft when it became operational later in 1889. He went to Galt No. 3 mine shaft in the spring of 1897, where he was placed in charge of re-timbering. He worked in this capacity until his retirement and the closing of the mine in March 1924.

whereby "green men" worked under the closest of supervision from holders of Miner's Certificates and under direct supervision of a fireboss. The men were mostly Polish with a few German immigrants, all young, intelligent, in good physical condition and (important at the time) were strong anti-Communists. The intent was to train miners quickly and begin to replace the increasing number taking retirement. The training program started on the morning of 18 October 1948 and all indications were that it was successful.

The installation of up-to-date equipment had never ceased. On 13 December 1949 permission was sought by general manager J. M. Davidson "to install two 100-HP North British Flameproof Diesel Locomotives in Galt No. 8 for two purposes: man haul on each side of mine in accordance with plans submitted; and feeding cars to the loading end of conveyors onto which is loading a Clarkson Red Bird Loader on butt entries on the east side." Approval was given on 16 January 1950 and the locomotives were operating in the mine by July. Constant checking showed not a trace of carbon monoxide in the mine from the diesel fumes.

A report on 30 June 1950 noted, "Output per man is down, due to so many faults. At present there are 12 entries crossing faults."

An interesting coal storage project was conducted at No. 8 not long before it closed. We are indebted to R. Donald Livingstone for details of the experiment. He wrote:

"An experiment to store lump coal without oxidation and the resultant degradation of the product was carried out at No. 8. An initial attempt to place the coal in a trench and cover it with straw to exclude the sun proved ineffectual.

"This was followed by a new procedure which proved to be very beneficial and was later used in the

Drumheller field. The procedure allowed the building of a sizeable stockpile during the slack summer period ready for the fall and winter rush. In addition to being able to supply the market at an appropriate time, it allowed miners' services to be utilized during normally slack times and thus prevent the dreaded lay-offs. Up to 27 000 tonnes a year eventually were stored at Galt Mine No. 10.

"The procedure was as follows: As the coal was received from the mine, it was run over the tippie and the 2.5 cm size (slack) was separated from the oversize (lump). These sizes were then loaded at two separate chutes and transported by truck to the storage area. The coal could not be piled higher than about 2.7 m lest heating and spontaneous combustion take place. A ramp was built up which the lump truck backed to discharge the load onto the pile. The ramp was moved forward as the pile grew to a predetermined length, when a new windrow was started. A second ramp allowed the slack coal to be discharged on top of the lump coal, thus forming a protective layer to prevent oxidation and degradation. In the fall the pile was loaded out by a front end loader, dumped on a belt conveyor and fed back into the tippie screening and cleaning plant.

"The coal stored perfectly and thus the feast or famine type of market could be satisfied. So successful was the operation that E. A. Lovett, a director of Lethbridge Collieries Ltd. and an owner of a Drumheller mine, came to Lethbridge, viewed the arrangements and immediately returned to Drumheller where the system was put into practice, thus nullifying the competitive edge Lethbridge had enjoyed."

The first indication of closure and abandonment was in a letter of 28 December 1956 to the director of mines from R. Donald Livingstone, general manager, when he requested, "forward to us a copy of the form required under Section 109 (1) of the Coal Mines Regulation Act 1955 for the abandonment of a mine." Completed forms were sent to Edmonton on 16 January 1957 and showed the intention to abandon the entire underground workings of No. 8 mine. Reason for abandonment was given as "Decrease in coal production enables the requirements [of the market] to be obtained from one mine [Mine No. 1263] thus increasing efficiency. Plans called for "Cessation of all mining, recovering of valuable equipment, blocking off shaft bottom and filling of hoisting and air shafts. Cessa-

Shipment of Native Coal

A Medicine Hat despatch of the 26th says the first shipment of coal from the Northwestern Mining and Transportation Company, Woodworth's mine, was made today, west to Calgary, being the first instalment of a 907-tonne contract they have made for that place, and the first native coal ever shipped west by rail in the Northwest. The coal is all that could be desired, burning clearly, without bad odors from gases, and forming a white ash and no clinkers. In about ten days, Woodworth will be in a position to deliver 454 tonnes per day.

The Winnipeg Daily Times 27 September 1883



Robert Livingstone

ducers of sulfur dioxide in North America.) Acid rain, at an average pH of 4.2, has since the 1960s caused acidification of 100,000 eastern Canadian lakes--about one in seven of all lakes east of Manitoba--and a massive decline in the vitality of eastern forests. Unfortunately transportation costs to Ontario increase the price of western coal by 50 percent. The federal government committed \$27 million from a \$1-billion Western Diversification Fund to help make western coal more competitive.

At time of writing coal goes east each week in unit trains from the Coal Valley area's Luscar Sterco mine, which has a contract with Ontario Hydro.

There was a flurry of local interest in coal again in the 1980s. The world price of oil had increased about 20X from its 1970 price of US\$1.80 a barrel and this had caused countries such as Japan to look elsewhere than the Middle East for assured supplies of energy. Coal was such a product and Canada was a politically-stable producer. Thus Canadian coal production increased from 8.2 million tonnes in 1969 to 33.6 million tonnes in 1979 and was projected to reach 37.2 million tonnes in 1981.

In April 1980, Petro-Canada Ltd. undertook to open an experimental mine near Kipp in Sec 30, Twp 9, Rge 22 and to obtain a sample of coal for testing in Japan and other Pacific Rim countries. A 250-tonne sample was shipped in December. Expectations were that, if agreements could be reached with prospective customers, by about 1984 the company would develop a mine to cost \$100 million and to employ 300 persons. Over \$5.0 million was expended for a concrete shaft, now covered over.

On 26 May 1981, Fording Coal Ltd., the coal mining

arm of CP Investments Limited, and Idemitsu Kosan Co. Ltd. of Japan announced their intention to open an underground thermal coal mine near Shaughnessy. The price of thermal coal had tripled since 1979, to around \$70 per tonne, thus making the project feasible. According to

The Livingstones

Coal mining was in the Livingstone's blood. Members of the family were coal miners in Fife, Lanark and West Lothian, Scotland, for at least four generations before emigrating to Petersburg, Ohio, where they operated a coal mine. The first generation of Lethbridge Livingstones was born there and, in order of age, were John, James and Robert. They grew up with coal mining and constituted the fifth generation so employed.

The brothers were prompted to come to Lethbridge because of their association in coal mining in Tennessee with their cousin, William Duncan Livingstone Hardie, called WDL, who preceded them to Lethbridge. He was manager of the Alberta Railway and Coal Company mines in the Lethbridge Field.

John, the eldest, was known to his fellow workers as Big Jack. He came to Lethbridge in 1896 as an official with the Alberta Railway & Coal Company. With his family, he spent one year in Beaver Mines where he and the late Bill Ripley opened the Christie Mine for the Great Northern Railway. The John Livingstone family lived for the entire year in a tent, John's wife, Elsie, being the cook for the mining crew. He then returned to Lethbridge and was pit boss at the Galt mines until his death in 1931. He was a member of Wesley Methodist Church, North Star Lodge No. 4 A. F. & A. M. [Ancient Free and Accepted Masons], and the Shrine Club [officially The Ancient Arabic Order of Nobles of the Mystic Shrine, or Shriners].

James, or Jim, as he was known, spent 40 years in the coal mines at Lethbridge. He came in 1897 and was associated with the Galt mines as hoisting engineer, master mechanic and later as surface foreman at Galt Mines Nos. 6 and 8. Jim was a member of Southminster United Church [formerly Wesley Methodist Church] and the North Star Lodge No. 4 A. F. & A. M.

Robert, the youngest, was a mining engineer. He worked in Ohio, Tennessee and Kentucky before coming to Lethbridge in 1895 where he became underground foreman of Galt Mine No. 3 and later at Galt Mine No. 6, when he left to work with the Alberta government. He served in turn as district mines inspector at Lethbridge and Calgary, and later as chief inspector of mines at Edmonton. He left that post in 1910 to return to Lethbridge as manager of the Galt mines. When the field merger took place at Lethbridge in spring 1935, resulting in the formation of Lethbridge Collieries Ltd., Livingstone was appointed general manager, a post he held until his retirement in 1938.

transporting coal from the shaker conveyors to the main haulage. The goal was to see all coal removed by mechanical means. Locally, these machines were introduced into Galt Mine No. 8 as part of an experiment. It was only moderately successful and soon abandoned at No. 8 due to the tenderness of the roof and the large amount of labor required to move the units.

Coal Lands

1. The following districts have been set apart and the lands therein withdrawn from ordinary sale and from settlement, and declared to be coal districts, the same to be known as those of the Souris river, the Bow river, the Belly river, and the Saskatchewan river, the said districts for the present to be composed as follows:

[Districts I. - Souris River Coal District, II. - Bow River Coal District, and IV. - Saskatchewan River Coal District, are listed and their land areas indicated.] III. - Belly River Coal District Townships 8, 9, 10, ranges 21, 22, 23, west of fourth meridian.

2. The land within the said coal districts will be surveyed as soon as possible, and thereafter will be periodically offered for sale by tender or public auction, at an upset price; the same, together with the terms and conditions of the sale, to be fixed from time to time by the Minister of the Interior.

3. With respect to leases which have already been granted, each lessee who has fulfilled the conditions thereof may, within two years from the date of the order-in-council authorizing his lease, convert the leasehold into freehold by paying in cash the upset price placed by the Minister of the Interior on the lands in the coal district wherein the said leasehold is situated; but the lease shall be null and void in all cases where the conditions have not been fulfilled by the lessee, especially the conditions contained in Clause 5 of the said regulations, which is as follows: "That failure to commence active operations within one year, and to work the mine within two years of the commencement of the term of the lease, or to pay the ground rent or royalty, shall subject the lessee to forfeiture of the lease and resumption of the land by the Crown."

4. In cases where the Minister of the Interior satisfies himself that companies, or persons, have expended considerable sums of money in exploring for coal within the limit of any district for which they may have applied under the regulations of the 17th December 1881, the said lands may be sold to such companies or persons at the upset price fixed for lands in the coal district in which such tract may be situated.

5. The boundaries beneath the surface of coal mining locations shall be the vertical planes or lines in which their surface boundaries lie.

6. The rights of lessees, and of persons in favor of whom orders-in-council have been passed, shall not be affected by these regulations, except in so far as they may be consistent therewith.

The Winnipeg Daily Times 19 October 1883

Sir Alexander Galt Museum



Charles Alexander Magrath

Lethbridge mines were desperate for men by 1915. In November of that year idle miners from British Columbia went to work at Coalhurst (Mine No. 0174). In May 1916 a contingent of Japanese miners arrived from the west coast in response to the heavy demand for coal and the shortage of labor. Efforts were made to secure the early release of miners from Canada's armed forces so they could return to work in the coal fields. In spite of all this, by August 1916 mines of the district were choked with orders and about 400 more men were needed, a condition that continued until the beginning of the post-Great War depression around 1919-20.

Coal production peaked in Lethbridge in 1919 when 2,000 men in ten major mines [a total of 19 mines were in operation] produced about one million tonnes of coal. The opening of the Drumheller coal field a few years earlier significantly affected the market once held by Lethbridge's collieries. Production declined fairly steadily until 1964 when, as a consequence of an ill-advised strike by workers at the Standard Mine at Shaughnessy, the local coal mining industry collapsed. For a brief period during the Second World War, 600 men in four major mines [a total of 14 to 16 mines were in operation] produced about one-half million tonnes of coal per year, an increase over the one-third million-tonne annual average during the depression years. Nevertheless, in 1939, miners worked only 25 per-



George Washington Houk and his wife, Victoria.

- In October 1935 the mine was leased to Joseph J. (Joe) Hamilton. The mine was worked seasonally over the next six years by Hamilton. Little new development work was done and much of the output seemed to have been taken from old pillars in the mine. There was some encroachment into Galt No. 8 leases. Hamilton extracted in the order of 115 000 tonnes of coal during the six years he had the mine.
- On 9 March 1936 a memo indicated that the mine was in retreat and that there was squeeze (over-stressing) on some of the remaining pillars and stumps in the mine. This was probably the result of the removal of many of the pillars and barrier pillars left to support the roof during earlier development work.
- The mine was officially abandoned on 15 September 1941 due to the lack of any more recoverable coal in the workings.
- The final entry in the file was a memo from Idwal N. Potter, district inspector, to the director of mines. It noted that Mine No. 54's entrances were adequately sealed when he checked them on 12 August 1963.

Mine No. 0055

Mine No. 0055, generally known as Russell's Mine, The Russell Mine and occasionally as The Pothole Mine, also Holton's Mine and Loxton's Mine, was located on Pothole Coulee in Lsd 8, Sec 18, Twp 7, Rge 21. The seam was at a depth of 18 to 37 m and consisted of a shale roof, 1.07 m of coal, and a shale floor. Total production of the mine was 24 900 tonnes of coal. A seasonal operation, it had a long history of changes in lessee/operators, as follows:

Nicholas and Marcella Sheran

Nicholas Sheran (1841-1882) packed a lot of living into his 41 years. Born in New York City, he apprenticed as a printer, then spent several years on Arctic whalers. He served in Company C of the 99th Regiment, New York National Guard, as a second lieutenant and saw service during the Civil War. During his time in the Army, Sheran met a soldier named Joseph Healy and, after hostilities ceased, he accompanied him back to Montana. There he became involved with John Jerome Healy, Joseph's older brother, and even in 1866 somewhat of a legend on the Montana frontier. Sheran became an Indian fighter, prospector and trader.

About June 1874 he came to Fort Whoop-Up, an American whiskey-trading post established in 1869 by Alfred Baker Hamilton and Johnny Healy. Sheran likely was familiar with the place and may have visited the post on occasion. He drew on the boating skills acquired as a boy on Arctic whalers and established a ferry service, consisting of two flat-bottomed rowboats, across the Belly River about 750 m northwest of the fort. He grubbed coal from a 45-cm seam in his spare time, selling the surplus to the Whoop-Up traders.

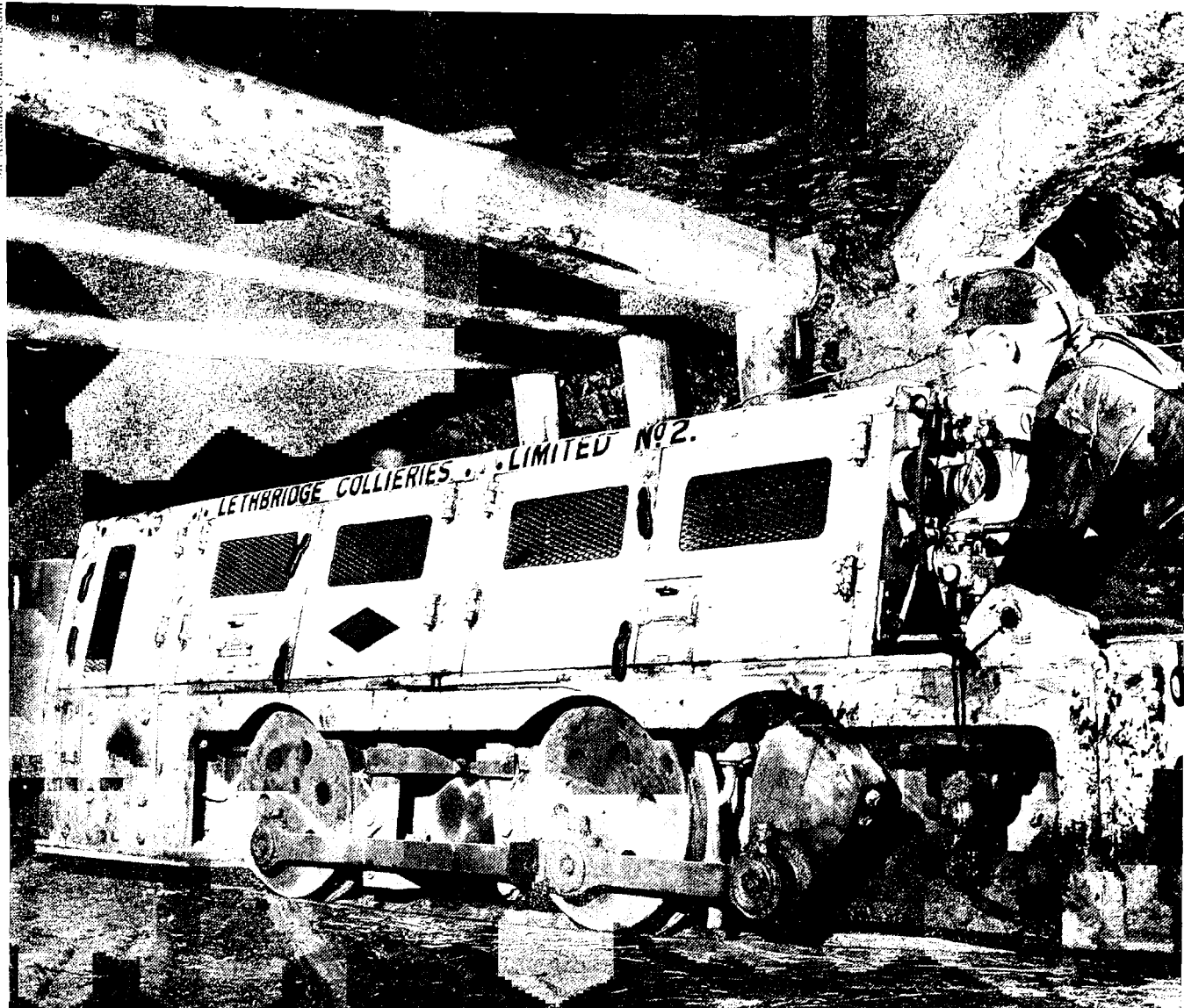
The North-West Mounted Police established the first Fort Macleod on an island in the Old Man's River on 13 October 1874. Sheran saw a larger market for his coal and moved downriver to The Coal Banks when a 1.5-m thick seam was exposed. By December NWMP work parties were hauling coal from Sheran's mine.

Sometime in 1877 Marcella Sheran (1844-1896) left New York and travelled to Fort Benton, then on to the Belly River country in the North-West Territories. [It has been impossible to document any of this as her name simply does not appear in obvious sources such as the Fort Benton Record or the Macleod Gazette.] After her arrival, she proved to be a valued partner to her brother as she had a sharp business sense and some book-keeping ability. She married Joseph McFarland of Fort Macleod on 4 July 1878 and went to live on his Pioneer Ranch.

In spite of vociferous opposition from his sister, after 1878 Nicholas Sheran lived common-law with a Peigan Indian woman called Mary Brown. Two children were born of the union: Charles, in February 1880; and William, in November 1882. Sheran never saw the second boy as he [Sheran] had drowned at Kipp's Crossing of the Old Man's River the previous May.

Marcella Sheran McFarland managed her brother's estate with considerable skill until her death from pneumonia in October 1896.

For additional information on Nicholas Sheran and his sister, Marcella, see Johnston (1983).



Diesel locomotive used in Galt Mine No. 8. Ventilation was such that diesel fumes did not pollute the air in the mine.

operators to help them to improve their mines and increase the output of coal in order to cope with wartime shortages of fuel. The Coal Emergency Board, as it was known to local mine managers, was created to assist in the procuring of sufficient supplies of coal for wartime needs and to supervise coal prices so as to control the cost of living under the Minister of Finance. The Board's principal activity was the securing of financial assistance to the coal industry. This took many forms: production subsidies, loans, grants, special depreciation and depletion allowances, wage equalization payments, and (in Alberta) the sponsorship of strip mines at Bow City, Taber and elsewhere. Kerr took advantage of the program to develop the Kerralta mine.

The main seam was struck at a depth from the surface of 53 m, or 117 m on the slope. A section through the seam from top to bottom was: draw slate, 13 cm; bone, 5.0 cm; coal, 51 cm; clay, 5.0 cm; coal, 71 cm; bone, 25 cm; and coal, 15 cm.

In July 1942, gas was found in several rooms and the mine inspector issued an order to stop work in them until ventilation was improved.

The mine was the scene of a gas explosion on 9 August 1943 in which four men lost their lives. They were: Samuel Crabb, William King, John Pente, and John Zubray. William Strickland was in charge of the rescue work until the arrival of mine inspectors. The mine was shut down after this event although water was pumped out daily in case a decision was made to reopen. About 816 tonnes of coal were removed in January-February 1944.

An account of the Kerralta Mine disaster as seen through the eyes of *Lethbridge Herald* reporters follows:

"Four men were trapped in the James Kerr drift mine, about three km north of the traffic bridge over the Oldman River, Monday afternoon and a rescue team from No. 8 Lethbridge Collieries has gone into the workings to endeavor to effect a rescue.

"Names of the mine workers caught in an explosion while an electrical cutter was being used in one of the rooms of the mine are given as follows: John Pente, William King, John Zubray and Samuel Crabb.

"Development work has been in progress for some months. The mine is located on the west side of the river and a road leads off from the main highway to the lease.



George Washington Houk and his wife, Victoria.

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Miners needed relaxation. Two methods of attaining this were to organize a band (above) or a baseball team (below). Unfortunately, there is very little information on either of these groups in the Galt archives. The band was not the first such organization but probably dates to the first decade of this century. The baseball team won the Senior Baseball Championship in 1936; the late George Onofrychuk is standing, second from the left.

Royal Lethbridge Collieries Ltd (Chester, Geo. Roberts, W. L. Hamilton)	Oct 1929-36
R. B. Simmons & Co. (Hamilton Estate)	Apr 1936-37
J. C. Chester	1938-51
Abandoned: 8 March 1951	

The mine was located about 3.2 km north of Hardeville. During initial development work there was a gas explosion, which resulted in the mine being made a safety lamp mine. John Suran and A. A. Dumphy, the latter a resident of Spokane, soon got into financial trouble including non-payment of wages. George Brearley and Joseph Cyrus Chester took over the run-down mine in 1925 and, by January 1926, as Royal Lethbridge Collieries Limited, had about 25 m to go to complete a second opening, which they were driving from below.

On 9 January 1928, the workmen took over the mine on a pooling arrangement but still operated as Royal Lethbridge Collieries, Alfred Ruffell in charge. These arrangements ended on 28 February 1929 and the mine was closed. By 28 October, Chester was back in charge and apparently making a serious effort to begin electrification and modernization of the mine. William Lamond Hamilton of Winnipeg was associated with the enterprise as Chester's partner by this time.

By April 1934 the mine was part of the W. L. Hamilton estate, which was in the process of being settled. Chester was still manager and was in the difficult position of not being able to get satisfactory information from the widow, Maud Hamilton, as to whether the mine would continue to operate or not. Mine inspectors were recording an impressive list of complaints.

The mine, now called The Hamilton Estate, was still operating in November 1935. At that time there was an unprecedented demand for coal from small local mines as they had to supply the city and local rural trade due to the closing of Galt No. 6 shaft. "Trucks are coming 70 miles for coal and waiting all day to get it," according to one report. The demand was seasonal hence the small mines tended to close during the summer months.

On 30 April 1936, Ronald B. Simmons, barrister of Calgary and administrator of the Hamilton Estate, announced he was taking over operation of Mine No. 1095. Joseph C. Chester, manager, who had been associated with the late W. L. Hamilton in the mining venture, announced he would not be personally responsible for any obligations incurred after 27 April when Simmons put his own men in the mine. Chester claimed ownership of the corporate name, Royal Lethbridge Collieries, and said it was registered to him in the Courthouse at Lethbridge.

Simmons found operation of the mine difficult although he employed George Roberts as manager. Coal land was leased from H. A. Dupen so that, on 30 September 1936, Royal Collieries had 40.5 ha available for development. On 7 April 1937, Simmons announced that he had ceased to operate Mine No. 1095. Creditors, notably Becker Lumber Company Limited, did not want to close the mine and consented to the hiring of Joseph C. Chester, former manager, to look after the property and continue to operate the mine. George Roberts was kept on as pitboss. On 16 April Chester changed the name to The Chester Mine and reported that, "when the estate is settled I will get permanent possession of the property."

Chester immediately made plans further to electrify and modernize the mine and much correspondence over the next several years dealt with this fact. On 5 May 1947 permission was sought to mine coal from land leased from the CPR in Lsd 7 and 2, Sec 30, Twp 9, Rge 21. A new airshaft was driven from the bottom to the surface. By this time Chester was assisted in management of the operation by his son, William Cyrus Chester, and from 1947 by Daniel J. Crabb who acted as overman and later as manager. (They were listed in reports from 1947 to 1951, inclusive, as Chester, Crabb & Chester.)

A 31 July 1950 letter from D. J. Crabb, mine manager, to John Crawford, director of mines, Edmonton, signalled the beginning of the end of the Chester Mine. Crabb said that water conditions in the new workings were so bad that all development work had stopped. Men were assigned to withdrawing pillars, which gave the mine, at most, about three seasons' work. But worse was to come.

On 22 August 1950, district inspector of mines E. H. Morgan noted, "The operators are stopping all development work. Each working place is so wet that their oldtimers are seeking work in other Lethbridge mines and are quitting as fast as they can get work elsewhere." Morgan went on to say, "I am sorry to see this, for the labour relations at this mine cannot be beat in any other mine in this Province."

The company had a reputation of mining as close as possible to old workings. As a result, a Chester Mine miner accidentally holed through into the water-filled workings of the former Galt No. 6 and the heretofore wet mine suddenly became a flooded mine.

Before this happened, however, Cy Chester arranged with engineer Don Livingstone of Lethbridge Collieries to draw up a plan showing relative positions of the north end of the abandoned Galt No. 6 workings and the Chester Mine. At the time they were about 76 m apart. Livingstone warned Chester that the old No. 6 workings were flooded and that it would be dangerous to approach them too closely. Chester continued to drive entries toward the old Galt No. 6 workings, hoping to draw off the water and take advantage of the several hundred meters of developed entries and obtain the several hundreds of tonnes of coal left when No. 6 was abandoned. Eventually a coal cutter made a small hole into the No. 6 workings and, although water rushed into the Chester Mine under a pressure of about 50 psi [3.52 kg/cm²], the flooding was gradual. If the coal cutter had not pierced the wall and an explosive charge had been fired to dislodge the undercut coal, a major catastrophe with heavy loss of life would have resulted. [When plans for both mines were examined sometime later the advance position of the Chester workings and the abandoned No. 6 workings were found to be less than six metres apart.

On 8 January 1951, the mine inspector's report read, "The water has now filled the mine and is raised to a point about 20 to 25 feet [6.1 to 7.6 m] up their haulage slope." Pumping (dewatering in coal mining jargon) began on 10 January. By this time the water was 7.3 m above the point where the men had holed through into old No. 6 workings. Miners had been laid off, at least temporarily. The outlook by 15 January was bleak. The water raised ver-



This photograph, taken in January 1965 at Galt Mine No. 10 (Mine No. 1263) at Sbaughnessy, gives the viewer an impression of the size and complexity of the surface physical plant that was necessary to complement the vast underground workings beneath. All of this had to be demolished and useable parts sold elsewhere when the mine closed in 1965. The carbonizer, discussed elsewhere, was taken down and shipped to southeastern Saskatchewan for use in the lignite fields there.

Gas in Lethbridge Coal Mines

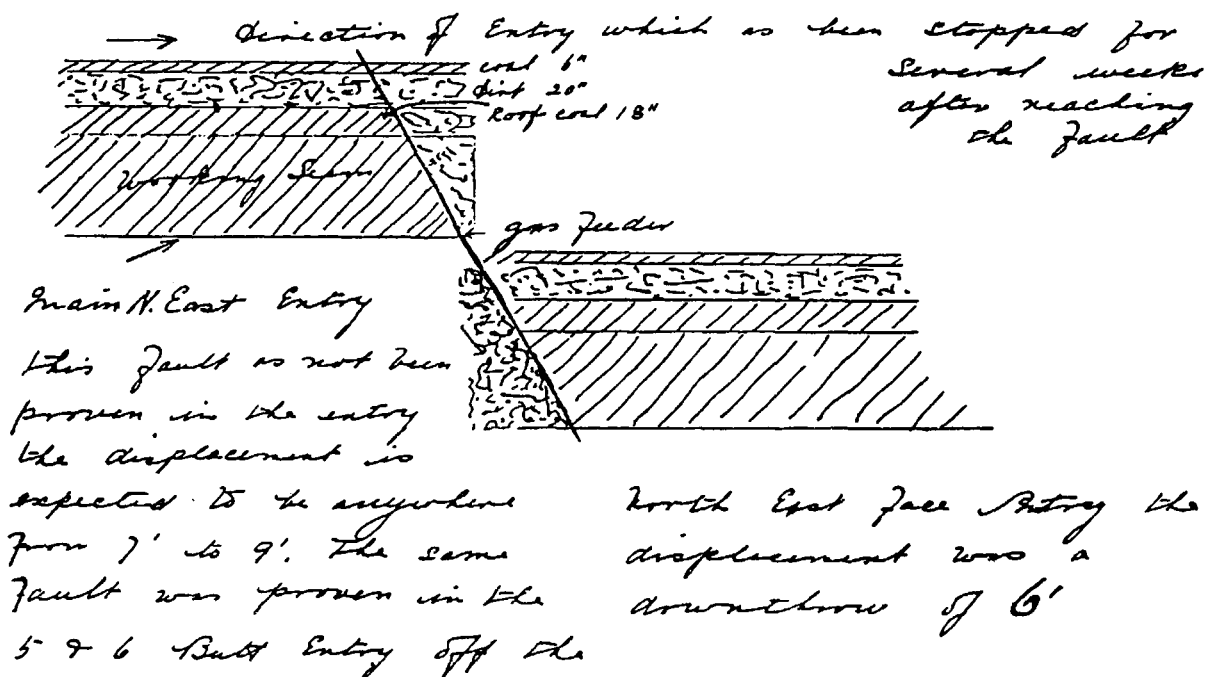
The Lethbridge coal mines were not considered to be gassy but gas did occur and constant vigilance was necessary.

The gas in coal mines is methane, also known as firedamp. It is a colorless, odorless, highly flammable gas, which can be explosive if mixed with air. Methane is the main constituent of natural gas. After-damp, the killer gas present in a mine after a fire or an explosion, is mostly nitrogen and carbon dioxide, with traces of free hydrogen and carbon monoxide.

The gas that was present in Lethbridge coal mines tended to come from cracks and crevices in the coal seam when miners drove through the many faults that characterized the field. As mine managers put it, "Guard against gas ignition when going through faults or troubled ground." The gas was often emitted in a small jet or "feeder," which, on ignition, produced a flame two or three inches long. Enough gas was present that it could occasionally trigger explosions, usually of a localized nature.

The diagram below was prepared by a mine inspector in connection with his investigation of burns suffered by a workman at the Chinook Coal Company mine at Commerce. Gas from feeders near a fault had collected in a pocket on the ceiling. When the workman stood erect under the pocket the open flame from his miner's lamp ignited a small explosion. Safety lights were in use by 1911, at least in the larger mines, and lessened the problem.

Managers watched mine ventilation closely. First and most important, it provided working men with an abundant supply of fresh air. Second, it diluted and vented poisonous gas before it could become hazardous. A small explosion of methane gas, particularly in dry mines, caused coal dust to go into suspension, thus setting the stage for a far more serious secondary explosion. [There were indications that this happened at Hillcrest, Alberta, in 1914, killing 189 men.] Such explosions knocked out the ventilating system and instantly used up two-thirds or more of the oxygen in the mine, replacing it with carbon dioxide.



after and by 6 July 1909 Townsley was sinking a slope at another point on the lease. Again, he was down about 20 m but had not reached coal. By 22 November 1911, the slope had been driven 82 m and had reached a 60-cm seam of coal. A report of 7 September 1912 indicated the mine was closed down, entrance to the mine fenced, no one around and all houses vacant. And on 11 February 1913 a final note in the file said that the mine had not operated for the last two years.

This mine was located in an area where such infamous people as David E. (Dave) Akers and Thomas Lee (Tom)

Purcell extracted coal in the 1880s and 1890s. [Both men were deeply involved in the illegal whiskey trade of 1869-1874. Purcell, particularly, continued to run booze into Canada from the United States until the mid-1890s. Purcell shot and killed Akers at the former's place on the Pothole in December 1893. He was convicted of manslaughter and sentenced to three years in Stony Mountain Penitentiary in Lethbridge's first murder trial.]

A record of all coal production was legally required from all mines. It seems obvious, however, that a few tonnes were taken from this one. A permit system was in place

William Stafford

William Stafford, the son of an English mining engineer and geologist, was born in Patna, Scotland, in 1842. After a Scottish education, he followed his father's calling. In 1867, he emigrated to Westville, Nova Scotia, to manage the coal mines of the Acadia Coal Company. In 1882, he was engaged by Sir Alexander Tilloch Galt to accompany Captain Nicholas Bryant to the West to assess coal mining possibilities there.

As the only practical coal mining engineer in the party, Stafford's counsel carried much weight when Sir Alexander and Elliott Torrance Galt and Bryant met to choose between opening a mine at Blackfoot Crossing, near modern Gleichen, or at the Coal Banks. Stafford opted for the latter because of the quality of the coal. Thus Lethbridge was born.

The actual location of the future city was dictated when, on 13 October 1882, Stafford decided to open a drift mine on the east side of the Belly (now Oldman) River at a point just north of today's CP Rail High Level Bridge.

Stafford supervised the opening of drift mines Nos. 1 to 9 and shafts Nos. 1 to 3. In 1894, he became Inspector of Mines for the District of Alberta and was followed as Mines Superintendent by William Duncan Livingstone Hardie. By this time, Stafford had become interested in ranching and resigned from the Galt company to follow that pursuit. A spacious ranch home, which became a community and social centre, was built in the river-bottom in what is now Peenaquim Park.

William Stafford died on 12 May 1907 and was buried in Mountain View Cemetery.

cent of the time at a production level which was only 40 percent of that in 1928. Six years later, in March 1945, miners worked only two days per week.

Alberta and Lethbridge recognized its coal pioneers on 18 July 1928 when a National Sites and Monuments Board of Canada marker to honor Nicholas Sheran was unveiled in Galt Gardens and a special issue of the Lethbridge Daily Herald was printed. The Lethbridge Historical Society worked for a full year on plans for the impressive ceremony.

The Great Depression of 1929-1939 turned out to be a particularly desperate time for Lethbridge's coal industry. The onset of the depression was brought home to Lethbridgians as early as August 1929 when miners in large numbers began to be laid off for lack of demand for coal. On 28 October, Lethbridge's city council met in emergency session to consider the mounting problems of unemployment and the many demands for relief.

Alderman Andrew Smeaton, labor representative on council, said that unemployment in the coming months would be serious and widespread. Smeaton forecast serious unemployment among Lethbridge miners for two reasons: the winter so far had been mild and little coal had been ordered or consumed, and there had been much con-

version to natural gas. In the United States, the Smoot-Hawley tariff act of 17 June 1930 added a 75-cent surcharge per ton (82 cents per tonne) of imported coal, effectively cutting off that market. As the depression wore on, Saskatchewan, traditionally one of Lethbridge's most assured markets, turned increasingly to its own lignite fields in the Weyburn-Estevan region. All of this compounded the local problem.

The population of Lethbridge averaged about 13,500 during the depression years. There were about 1,000 unemployed persons, mostly coal miners with wives and families, on relief by 3 June 1931. From 1932 to 1939, inclusive, the number of unemployed persons on relief averaged about 2,000 per year. Robert Livingstone was called on to head up relief camps at the exhibition grounds, Warner and elsewhere. The reality of the Great Depression, in Lethbridge as elsewhere, was that an unemployed person could not find any kind of job in any type of work at any rate of pay anywhere. Unemployment Insurance was unknown. Relief, now called welfare, was for many the only hope, the only bulwark against destitution, even actual starvation.

On 20 April 1935, Andrew A. Millar, chief inspector of mines, Edmonton, was notified by general manager Robert Livingstone that a field merger of local coal companies had come into force on 1 April. (Millar had been aware of the corporate restructuring since 22 January 1935 but lacked specifics.) The merger was undertaken with the idea of closing unprofitable operations and amalgamating sales and executive forces so as to reduce overhead and to draw together an organization that could be operated profitably.

The change in ownership affected Galt Mine No. 8 at Lethbridge, formerly owned by the CPR, the Lethbridge Colliery at Coalhurst, formerly owned by Royalties Oil & Shares Corp. Ltd., and the Standard Mine at Shaughnessy and Federal Mine at Lethbridge, formerly owned by the Cadillac Coal Co., Ltd. These properties were united under one company incorporated as the Lethbridge Collieries, Ltd., with head office in Calgary and mine office in Lethbridge. Officials of the new company were: directors--Samuel G. Porter (president), E. A. Lovett, Wm. Toole, Christopher S. Donaldson, and A. E. Whitmore; general manager, Robert Livingstone; secretary-treasurer and sales manager, Benjamin Tyler Coon; mine managers--Galt Mine No. 8, Robert Livingstone; Lethbridge Colliery, John Marshall Davidson; and Standard and Federal Mines, Christopher Storrar Donaldson. "Galt Coal," "Cadillac Coal," and "Imperial Coal" were retained as brand names since they had widespread customer recognition and acceptance.

Benjamin Tyler Coon, an official with the CPR Natural Resources division for many years, succeeded Robert Livingstone upon the latter's retirement in 1938. Ben Coon died in office on 20 September 1943 and was succeeded as general manager by C. S. Donaldson, director of Lethbridge Collieries since the 1935 field merger. Donaldson retired on 31 March 1946 and was followed by John M. Davidson. And on 1 October 1956 Davidson was replaced by R. Donald Livingstone, a son of the first general manager, Robert Livingstone. After closure of the last Galt mine, Livingstone continued as general manager of

The year 1893 was a significant one at Lethbridge. It was the best year so far for the company even though from 1888 to 1896 the Canadian economy was depressed and there were few markets for coal. But after 1893 total tonnage and sales of coal from the Lethbridge mines fell off and did not recover until 1898 when output reached 152 643 tonnes, increasing to 218 193 tonnes in 1905. The Incline shut down on 15 May 1893 and signalled the end of the riverbottom drift mines. Seventy-five persons, including 50 miners, were affected although all but about 15 were absorbed elsewhere in the Galt organization. Finally, Sir Alexander Galt died on 21 September 1893. The *Lethbridge News* said, "Sir Alexander Galt deserved well from the people of Canada as a whole, but there are some parts of it which have particularly benefited by his abilities. Among these was the Town of Lethbridge, which owes its very existence to the dead statesman. That large deposits of coal existed in this district was well known to many before Sir Alexander Galt undertook the task of forming a strong company to develop and work the mines. It was no easy task to induce a large amount of English capital to be ventured in such an undertaking. But Sir Alexander Galt had peculiar advantages. His residence and financial dealings on behalf of the Canadian government in London had placed him in touch with the great English capitalists by whom his financial ability was fully recognized."

Galt No. 1 shaft closed on 5 March 1897. As a result

a large number of miners, principally recently-employed Hungarians, left for the Kootenay country and new opportunities there.

The abandonment of the riverbottom drift mines in 1893 implied a new devotion of the Galt companies towards large-scale exploitation of the coal resources at Lethbridge. But worldwide depression and coal markets that never quite lived up to expectations plagued the operation. Colonization was proceeding, albeit slowly, and the CPR, as the only major commercial market in the region, essentially dictated what the Galt mines would produce and how much they would receive for their product.

All of this changed around the turn of the century. The worldwide depression ended, in part because of massive gold discoveries in South Africa and the Klondike. Settlement of the western prairies finally got underway accompanied by a booster mentality that thought anything was possible. Locally, the Galt company's new 48 600-ha irrigation project was the first area to be settled and farmed. By 1905 dry farming techniques had become widely known and settlement of the dryland--the so-called Winter Wheat Lands--was well underway. Railway lines were laid into the newly-settled lands and many small towns developed. The coal mines of the Lethbridge area began to proliferate, as will be shown on the following pages.

But first we will discuss briefly the 20th century rise and fall of Lethbridge's coal industry.

Lethbridge Colliery, Alberta, N.W.T. 1885 And Previous Years

In the Lethbridge colliery there are two seams of coal separated by a thin layer (about one inch) of slate.

These seams are undulating and very regular, their combined thickness being about five feet two inches.

The system of working is that of laying off "rooms" at right angles to the double "entries" (each being nine feet wide) which are driven "over the butt" of the coal.

The "rooms" are run nine feet wide a distance of 15 feet back from the "entries" when they are then widened out to 20 feet. By this means all the coal is extracted, leaving pillars 15 x 24 feet along the sides of the "entries" to support the roof.

The company has introduced six American coal mining machines and two air drills; these machines greatly facilitate the mining and enable the company at any time to greatly increase their output, should the demand require it.

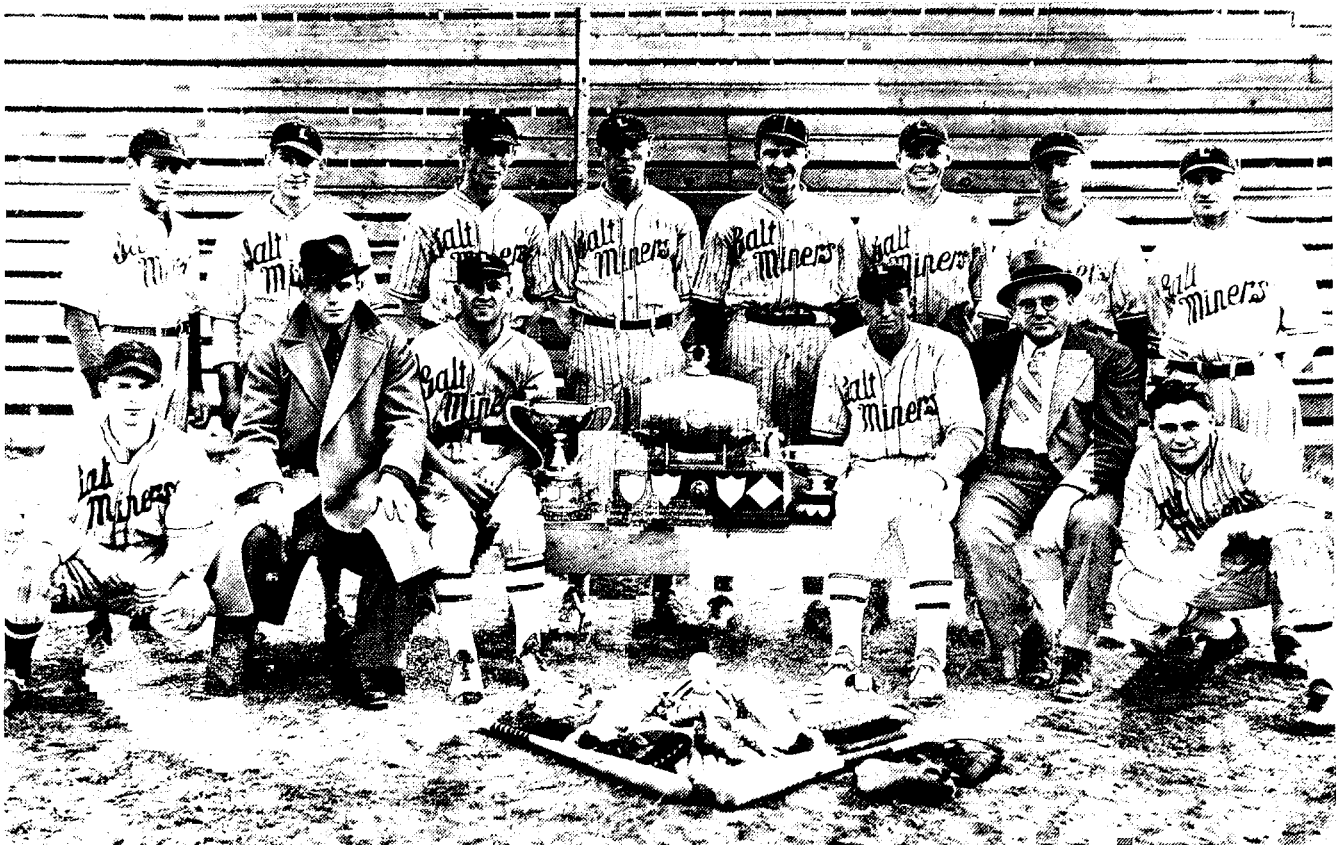
The power employed to work the machines is

compressed air manufactured by a Norwalk compressor 20-inch cylinder with 24-inch stroke and weighs about 15 tons. In connection with this compressor, there are three reservoirs for storing the air, about 5,000 feet of five-inch main pipe and about 5,000 feet of one-and-a-half-inch pipe for the purpose of conveying the air to the various workings of the mine. The compressor is situated in the same building with a 60 H. P. hoisting engine, which hauls the trucks out of the valley, 2,200 feet up an inclined railway on to the "Bankhead", where the coal is dumped into chutes and discharged into the railway cars, which stand on scales below. Compressed air is also utilized for pumping water out of the mines, running the emery wheel for sharpening tools and [running] the forge in the blacksmith's shop. Three large tubular boilers are employed for making steam for the hoisting engine and compressor.

Total expenditures during the year [1885] on Capital Account amounts to \$38,283.00 while Working Expenditure was \$177,480.00.

Total expenditure up to 31st December 1885 [presumably from April 1882] on Capital Account amounts to \$175,180.52 while the Working Expenditure up to the same date amounts to \$201,323.85.

C. A. Magrath
Lethbridge, Alberta



Miners needed relaxation. Two methods of attaining this were to organize a band (above) or a baseball team (below). Unfortunately, there is very little information on either of these groups in the Galt archives. The band was not the first such organization but probably dates to the first decade of this century. The baseball team won the Senior Baseball Championship in 1936; the late George Onofrychuk is standing, second from the left.

Sir Alexander Galt Dies

Montreal, September 19 [1893].--Sir Alexander Tilloch Galt, G.C.M.G., D.C.L., died at 3:30 this morning. The deceased gentleman was one of the most prominent men in Canadian politics prior to, and for some time after, confederation, and was the first occupant of the position of High Commissioner for Canada in England, the position now filled by Sir Charles Tupper.

Sir Alexander Tilloch Galt, son of John Galt, the author, by Elizabeth, daughter of Dr. Tilloch, was born at Chelsea, September 6, 1817, and educated in England and Canada. He was in the service of the British and American Land Company from 1833 to 1856, and commissioner and manager of their entire estates from 1844 to 1856. He was first elected to the Canadian parliament in 1849. The governor general, Sir E. W. Head, requested him to form an administration in August 1856. This task he declined, though he joined Mr. Cartier's administration as finance minister, and held that office until the ministry was defeated on the Militia bill in May 1862. Sir Alexander resumed his post as finance minister in March 1864, and retired in August 1866, when the cabinet failed to carry a measure securing educational privileges to the Protestant minority in Lower Canada, in view of the greatly increased powers obtained by the French and Roman Catholic majority under confederation. Mr. Galt felt that, as the representative of the Protestants of Lower Canada, he could best serve their interests by retiring. The results appear to have justified his views. He was appointed a delegate for Lower Canada, to confer with

the Imperial government on the subject of confederation, and in that capacity, although not a member of the Canadian government, he secured protection for his co-religionists. On the confederation being affected he was appointed minister of finance in the new Dominion government, and held that office from July 1 till November 4, 1867, when for private reasons he resigned.

Sir Alexander was regarded as the ablest financier in the colonies, and had taken a prominent part in all measures adopted to unite and consolidate British America. He was created a knight commander of the order of St. Michael and St. George in 1869, for his long official colonial service. In July 1875 he was appointed a commissioner on behalf of Great Britain, under treaty of Washington, May 1871, and more recently he acted as a member of the Halifax fisheries commission. He was nominated a GCMG, May 25, 1878. Sir Alexander was appointed high commissioner for Canada, in England, in 1880, and was delegate for Canada at the International Monetary Conference in Paris in 1881. He was a member of the executive and general committees of the great International Fisheries exhibition in 1883. In 1883 he resigned his high commissionship and returned to Canada.

In 1882 he established the North Western Coal and Navigation Company, Limited, which opened at Lethbridge the first coal mines in the North-West Territories as a commercial enterprise; and in 1885 constructed 109 miles (175 km) of railway, connecting the mine with the CPR.

The Lethbridge News 21 September 1893

working. [Cost of timber props to support the roof was an expensive item, averaging about ten cents per tonne of coal produced. Thus, in June 1882, the Galts established a sawmill about 48 km northwest of Fort Macleod in the Porcupine Hills to produce mine props and milled lumber.]

The cars of coal hauled to the top of the Incline were taken to the Bankhead, where they were tipped over screens, the various classes of lump, nut and screenings being sorted out and landed in three separate cars standing on parallel tracks under the screens. The Incline had a double track, and on each trip a rake of five cars holding about a tonne of coal each was taken up, a rake of five empties being sent down at the same time. A trip was made in three minutes. At the Bankhead a colliery car of coal was dumped over the screens every 45 seconds during working hours. Mining from the shafts was the same as from the drifts except that entries were started from the bottom of the shaft instead of from the river bank. As the loaded colliery cars came back to the bottom of the shaft they were pushed one at a time on to an elevator platform and were carried to the top of the shaft, 91 m, in 20 seconds.

A large quantity of machinery was used in connection with the colliery, including several 60 and 100 HP steam engines with boilers, hoisting drums, and cages. A smaller engine was used to pump water out of the shafts. Legg mining machinery was used to undercut the face, after

which miners shot down the coal with black powder and loaded it on to mine cars. Legg cutting machines operated on compressed air brought in from a compressor at the head of the Incline.

It is not generally known that the Galt company set up the town's first waterworks system in 1883. It was designed to wash coal from the drift mines but, in 1885, a pipeline was run up the coulee hill to a water tank at the roundhouse. The line was then extended to a hydrant at the corner of 1st St and 1st Ave S. Horse-drawn 2275-L water tanks loaded up here and their drivers filled barrels at all homes and businesses. Also nine underground 68.2-m³ water reservoirs were built in the downtown area for fire fighting purposes. The company water line eventually was extended to Galt No. 3 Mine. It was replaced by the modern civic waterworks, opened on 1 January 1905.

The company produced 20 865 tonnes of coal in 1885, its first year of operation with a transport system in place. In 1893, output was 726 tonnes a day or 145 149 tonnes for the season, for all of which there was ready sale. The Galt seam being worked at Lethbridge contained 20 180 tonnes of coal under each hectare. About half could be extracted, the rest was left as supports for the main galleries and as waste. About 101 ha had been worked out by 1893.



George Washington Houk and his wife, Victoria.

- In October 1935 the mine was leased to Joseph J. (Joe) Hamilton. The mine was worked seasonally over the next six years by Hamilton. Little new development work was done and much of the output seemed to have been taken from old pillars in the mine. There was some encroachment into Galt No. 8 leases. Hamilton extracted in the order of 115 000 tonnes of coal during the six years he had the mine.
- On 9 March 1936 a memo indicated that the mine was in retreat and that there was squeeze (over-stressing) on some of the remaining pillars and stumps in the mine. This was probably the result of the removal of many of the pillars and barrier pillars left to support the roof during earlier development work.
- The mine was officially abandoned on 15 September 1941 due to the lack of any more recoverable coal in the workings.
- The final entry in the file was a memo from Idwal N. Potter, district inspector, to the director of mines. It noted that Mine No. 54's entrances were adequately sealed when he checked them on 12 August 1963.

Mine No. 0055

Mine No. 0055, generally known as Russell's Mine, The Russell Mine and occasionally as The Pothole Mine, also Holton's Mine and Loxton's Mine, was located on Pothole Coulee in Lsd 8, Sec 18, Twp 7, Rge 21. The seam was at a depth of 18 to 37 m and consisted of a shale roof, 1.07 m of coal, and a shale floor. Total production of the mine was 24 900 tonnes of coal. A seasonal operation, it had a long history of changes in lessee/operators, as follows:

Nicholas and Marcella Sheran

Nicholas Sheran (1841-1882) packed a lot of living into his 41 years. Born in New York City, he apprenticed as a printer, then spent several years on Arctic whalers. He served in Company C of the 99th Regiment, New York National Guard, as a second lieutenant and saw service during the Civil War. During his time in the Army, Sheran met a soldier named Joseph Healy and, after hostilities ceased, he accompanied him back to Montana. There he became involved with John Jerome Healy, Joseph's older brother, and even in 1866 somewhat of a legend on the Montana frontier. Sheran became an Indian fighter, prospector and trader.

About June 1874 he came to Fort Whoop-Up, an American whiskey-trading post established in 1869 by Alfred Baker Hamilton and Johnny Healy. Sheran likely was familiar with the place and may have visited the post on occasion. He drew on the boating skills acquired as a boy on Arctic whalers and established a ferry service, consisting of two flat-bottomed rowboats, across the Belly River about 750 m northwest of the fort. He grubbed coal from a 45-cm seam in his spare time, selling the surplus to the Whoop-Up traders.

The North-West Mounted Police established the first Fort Macleod on an island in the Old Man's River on 13 October 1874. Sheran saw a larger market for his coal and moved downriver to The Coal Banks when a 1.5-m thick seam was exposed. By December NWMP work parties were hauling coal from Sheran's mine.

Sometime in 1877 Marcella Sheran (1844-1896) left New York and travelled to Fort Benton, then on to the Belly River country in the North-West Territories. [It has been impossible to document any of this as her name simply does not appear in obvious sources such as the Fort Benton Record or the Macleod Gazette.] After her arrival, she proved to be a valued partner to her brother as she had a sharp business sense and some book-keeping ability. She married Joseph McFarland of Fort Macleod on 4 July 1878 and went to live on his Pioneer Ranch.

In spite of vociferous opposition from his sister, after 1878 Nicholas Sheran lived common-law with a Peigan Indian woman called Mary Brown. Two children were born of the union: Charles, in February 1880; and William, in November 1882. Sheran never saw the second boy as he [Sheran] had drowned at Kipp's Crossing of the Old Man's River the previous May.

Marcella Sheran McFarland managed her brother's estate with considerable skill until her death from pneumonia in October 1896.

For additional information on Nicholas Sheran and his sister, Marcella, see Johnston (1983).



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Rise and Fall of the Coal Industry at Lethbridge

Resource industries are notoriously sensitive to market forces and the coal mines of the Lethbridge region were no exception. The primary Lethbridge market was always for domestic coal although it was used in CPR locomotives when the mines were first opened. Unlike steam coal, where users tended to be a few railways and industries with a constant demand, users of domestic coal consisted of thousands of householders drawing a heavy supply in winter for heating and cooking but a very limited supply in summer for cooking purposes only. Further, the domestic coal fields were tied to the agricultural economy of the prairies so that demand varied with crop conditions. Variable winter weather strongly influenced demand. The coal could not be stored in the open so mines had to operate on the basis of producing only sufficient coal to fill current orders.

This led to great fluctuations in demand with full employment for a few months followed by lengthy layoffs. When generally difficult labor relations, particularly in the early years, were added to strongly seasonal demand and a volatile market the potential for trouble was always present. Strikes became a frequent event, instigated by whichever side was in a position temporarily to exert economic pressure on the other.

[It should be pointed out that this referred mostly to the early years from about 1905 to 1930. Local miners were members of the United Mine Workers of America, the most powerful union in North America for decades. It was not until the 1930s that industry in general began to confront such union strength in, for example, the American Federation of Labor and the Congress of Industrial Organizations or AFL/CIO, and not until the 1950s that government began to do so in, for example, the small but militant Canadian Union of Postal Employees or CUPW. Thus, many people failed to understand the difficulties faced by early mine owners in negotiating wage-benefit contracts with a monolithic union such as the UMW. Strikes became less frequent as both parties learned from their mistakes and, eventually, long periods of relative labor peace began to characterize the industry.]

One of the most celebrated of these strikes was the miners' strike of 1906. Rising prices, a natural outgrowth of an overheated economy, caused considerable discontent among a large majority of Lethbridge's workers. In February, believing that their wages were not keeping pace with inflation, miners from the Galt and Ashcroft collieries sought to increase their earnings and decrease their working hours by forming Local 574 in District 18 of the United Mine Workers of America. Only a month later they presented the Alberta Railway & Irrigation Company with a list of demands. The company, under managing director Sir Augustus M. Nanton, rejected the demands out of hand and on 9 March 1906 the union called a strike. Initially the strike was peaceful but when the company hired 100 men to keep the mine open and several private detectives to spy on the strikers, the situation turned ugly. Several times during the summer angry miners and their wives attacked policemen protecting the strikebreakers; on two occasions explosives damaged the homes of employed workers.

By the end of the summer the strike had reached a stalemate and intervention was necessary to prevent a coal famine later that winter. Lethbridge's city council and its Board of Trade tried to arbitrate but met with little success as neither was trusted by labor. In November the Hon. W. R. Motherwell, Commissioner of Agriculture with the government of Saskatchewan, fearing a coal shortage, pressured the dominion government to act. The federal government was receptive to intervention because a coal famine would seriously hurt immigration to the prairies and would create much localized hardship. It sent its senior mediator, Deputy Minister of Labor William Lyon Mackenzie King, to find a settlement. King set up in the Lethbridge Hotel and, by alternately cajoling and bullying the workers, brought about an accord. King was helped by the absence of Nanton, who was at the Montreal bedside of his dying mother, and by being able to deal directly with Peter Lawrence Naismith, general manager, and William D. L. Hardie, mines manager, of the Galt interests in Lethbridge. The mines reopened on 6 December 1906.

[Oral tradition among mine officials of the region has it that a basis for settlement of the strike had been arrived at before Mackenzie King reached Lethbridge. Negotiators wired him at Winnipeg to return to Ottawa as he was not needed. However, Mackenzie King insisted on proceeding to Lethbridge to reap the political benefits and publicity that accompanied a settlement.]

The long and bitter strike provided workers with few immediate gains. The miners won a small wage increase and the right of collective bargaining, but because the company refused to collect union dues from the men's wages, they failed to gain union recognition. The disappointment left a bitter legacy: strikes varying in length from three to eight months occurred in 1909, 1911, 1919, 1922, 1923 and 1924.

Based on his experience at Lethbridge, Mackenzie King in 1907 drafted, and Parliament enacted into law, The Industrial Disputes Investigation Act, long a model of labor conciliation legislation. A Royal Commission, chaired by Arthur L. Sifton, was set up to study the coal mining industry in the Province of Alberta. Partially as a result, the Alberta government in 1907 passed its first Workman's Compensation Act. And in 1908, the government legislated the eight-hour day, popularly known as "The Eight-Hour Law," long an objective of labor. The law became effective on 1 April 1909. [On 10 June 1943, the five-day work week began to be seriously discussed as a post-Second World War objective by local coal miners.]

Nevertheless, in spite of strikes and other problems, coal mining played an important part in the economy of Lethbridge, particularly in the early decades of the century. The excellent quality of Lethbridge coal as a domestic fuel was widely recognized and the Galt logo, a shield on which was written in black and red "Galt Coal: Burns All Night," was known to consumers across the four western provinces and in several adjoining states. One of us (AJ) was raised in a coal stove-heated farm home in southwestern Saskatchewan and can attest that Galt coal did indeed "burn all night."

By 1909 the Lethbridge district was the largest single



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Gas in Lethbridge Coal Mines

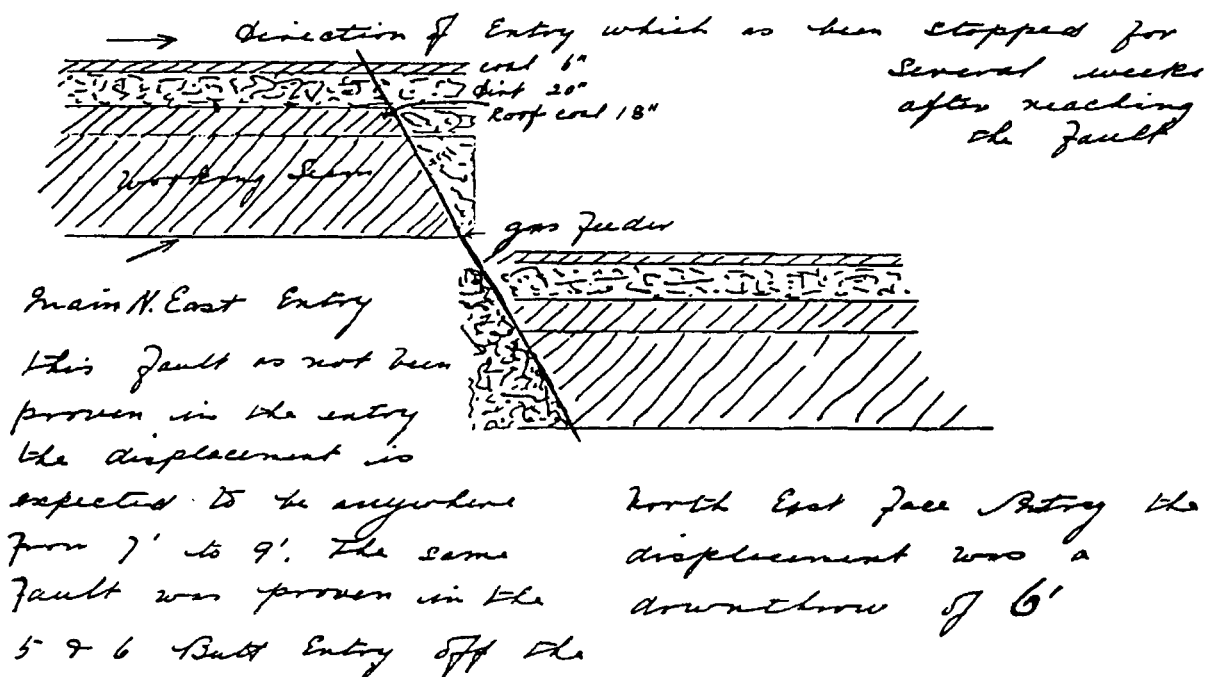
The Lethbridge coal mines were not considered to be gassy but gas did occur and constant vigilance was necessary.

The gas in coal mines is methane, also known as firedamp. It is a colorless, odorless, highly flammable gas, which can be explosive if mixed with air. Methane is the main constituent of natural gas. After-damp, the killer gas present in a mine after a fire or an explosion, is mostly nitrogen and carbon dioxide, with traces of free hydrogen and carbon monoxide.

The gas that was present in Lethbridge coal mines tended to come from cracks and crevices in the coal seam when miners drove through the many faults that characterized the field. As mine managers put it, "Guard against gas ignition when going through faults or troubled ground." The gas was often emitted in a small jet or "feeder," which, on ignition, produced a flame two or three inches long. Enough gas was present that it could occasionally trigger explosions, usually of a localized nature.

The diagram below was prepared by a mine inspector in connection with his investigation of burns suffered by a workman at the Chinook Coal Company mine at Commerce. Gas from feeders near a fault had collected in a pocket on the ceiling. When the workman stood erect under the pocket the open flame from his miner's lamp ignited a small explosion. Safety lights were in use by 1911, at least in the larger mines, and lessened the problem.

Managers watched mine ventilation closely. First and most important, it provided working men with an abundant supply of fresh air. Second, it diluted and vented poisonous gas before it could become hazardous. A small explosion of methane gas, particularly in dry mines, caused coal dust to go into suspension, thus setting the stage for a far more serious secondary explosion. [There were indications that this happened at Hillcrest, Alberta, in 1914, killing 189 men.] Such explosions knocked out the ventilating system and instantly used up two-thirds or more of the oxygen in the mine, replacing it with carbon dioxide.



after and by 6 July 1909 Townsley was sinking a slope at another point on the lease. Again, he was down about 20 m but had not reached coal. By 22 November 1911, the slope had been driven 82 m and had reached a 60-cm seam of coal. A report of 7 September 1912 indicated the mine was closed down, entrance to the mine fenced, no one around and all houses vacant. And on 11 February 1913 a final note in the file said that the mine had not operated for the last two years.

This mine was located in an area where such infamous people as David E. (Dave) Akers and Thomas Lee (Tom)

Purcell extracted coal in the 1880s and 1890s. [Both men were deeply involved in the illegal whiskey trade of 1869-1874. Purcell, particularly, continued to run booze into Canada from the United States until the mid-1890s. Purcell shot and killed Akers at the former's place on the Pothole in December 1893. He was convicted of manslaughter and sentenced to three years in Stony Mountain Penitentiary in Lethbridge's first murder trial.]

A record of all coal production was legally required from all mines. It seems obvious, however, that a few tonnes were taken from this one. A permit system was in place



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Robert Livingstone

ducers of sulfur dioxide in North America.) Acid rain, at an average pH of 4.2, has since the 1960s caused acidification of 100,000 eastern Canadian lakes--about one in seven of all lakes east of Manitoba--and a massive decline in the vitality of eastern forests. Unfortunately transportation costs to Ontario increase the price of western coal by 50 percent. The federal government committed \$27 million from a \$1-billion Western Diversification Fund to help make western coal more competitive.

At time of writing coal goes east each week in unit trains from the Coal Valley area's Luscar Sterco mine, which has a contract with Ontario Hydro.

There was a flurry of local interest in coal again in the 1980s. The world price of oil had increased about 20X from its 1970 price of US\$1.80 a barrel and this had caused countries such as Japan to look elsewhere than the Middle East for assured supplies of energy. Coal was such a product and Canada was a politically-stable producer. Thus Canadian coal production increased from 8.2 million tonnes in 1969 to 33.6 million tonnes in 1979 and was projected to reach 37.2 million tonnes in 1981.

In April 1980, Petro-Canada Ltd. undertook to open an experimental mine near Kipp in Sec 30, Twp 9, Rge 22 and to obtain a sample of coal for testing in Japan and other Pacific Rim countries. A 250-tonne sample was shipped in December. Expectations were that, if agreements could be reached with prospective customers, by about 1984 the company would develop a mine to cost \$100 million and to employ 300 persons. Over \$5.0 million was expended for a concrete shaft, now covered over.

On 26 May 1981, Fording Coal Ltd., the coal mining

arm of CP Investments Limited, and Idemitsu Kosan Co. Ltd. of Japan announced their intention to open an underground thermal coal mine near Shaughnessy. The price of thermal coal had tripled since 1979, to around \$70 per tonne, thus making the project feasible. According to

The Livingstones

Coal mining was in the Livingstone's blood. Members of the family were coal miners in Fife, Lanark and West Lothian, Scotland, for at least four generations before emigrating to Petersburg, Ohio, where they operated a coal mine. The first generation of Lethbridge Livingstones was born there and, in order of age, were John, James and Robert. They grew up with coal mining and constituted the fifth generation so employed.

The brothers were prompted to come to Lethbridge because of their association in coal mining in Tennessee with their cousin, William Duncan Livingstone Hardie, called WDL, who preceded them to Lethbridge. He was manager of the Alberta Railway and Coal Company mines in the Lethbridge Field.

John, the eldest, was known to his fellow workers as Big Jack. He came to Lethbridge in 1896 as an official with the Alberta Railway & Coal Company. With his family, he spent one year in Beaver Mines where he and the late Bill Ripley opened the Christie Mine for the Great Northern Railway. The John Livingstone family lived for the entire year in a tent, John's wife, Elsie, being the cook for the mining crew. He then returned to Lethbridge and was pit boss at the Galt mines until his death in 1931. He was a member of Wesley Methodist Church, North Star Lodge No. 4 A. F. & A. M. [Ancient Free and Accepted Masons], and the Shrine Club [officially The Ancient Arabic Order of Nobles of the Mystic Shrine, or Shriners].

James, or Jim, as he was known, spent 40 years in the coal mines at Lethbridge. He came in 1897 and was associated with the Galt mines as hoisting engineer, master mechanic and later as surface foreman at Galt Mines Nos. 6 and 8. Jim was a member of Southminster United Church [formerly Wesley Methodist Church] and the North Star Lodge No. 4 A. F. & A. M.

Robert, the youngest, was a mining engineer. He worked in Ohio, Tennessee and Kentucky before coming to Lethbridge in 1895 where he became underground foreman of Galt Mine No. 3 and later at Galt Mine No. 6, when he left to work with the Alberta government. He served in turn as district mines inspector at Lethbridge and Calgary, and later as chief inspector of mines at Edmonton. He left that post in 1910 to return to Lethbridge as manager of the Galt mines. When the field merger took place at Lethbridge in spring 1935, resulting in the formation of Lethbridge Collieries Ltd., Livingstone was appointed general manager, a post he held until his retirement in 1938.



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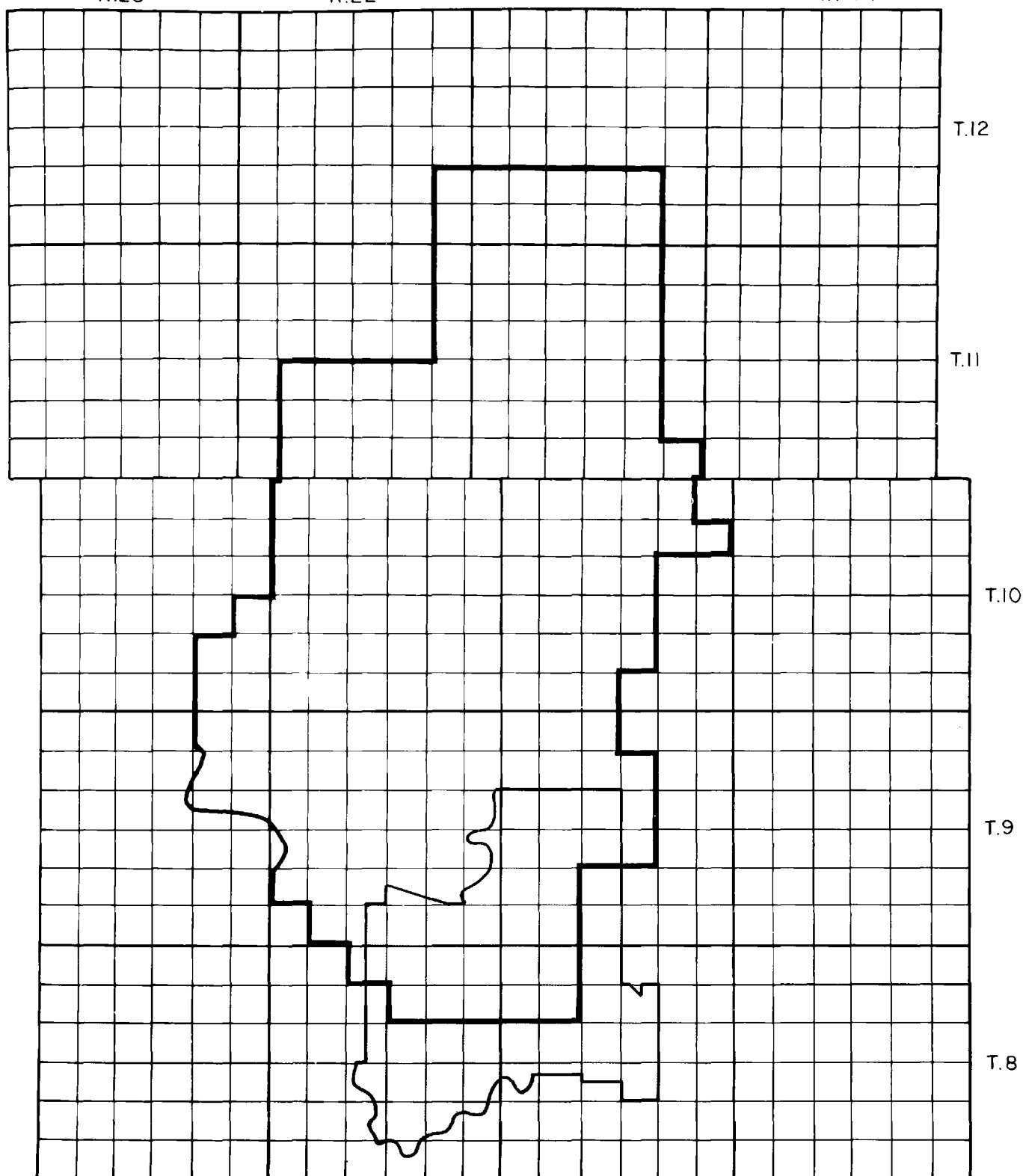
The most visible signs of the once-important coal mines of the Lethbridge district are the remains of the tibble and the water tower (shown here in silhouette), many former buildings, and abandoned coal cars and other equipment at the former site of Galt Mine No. 8. Consideration is being given to developing the tourist potential of the location.

R.23

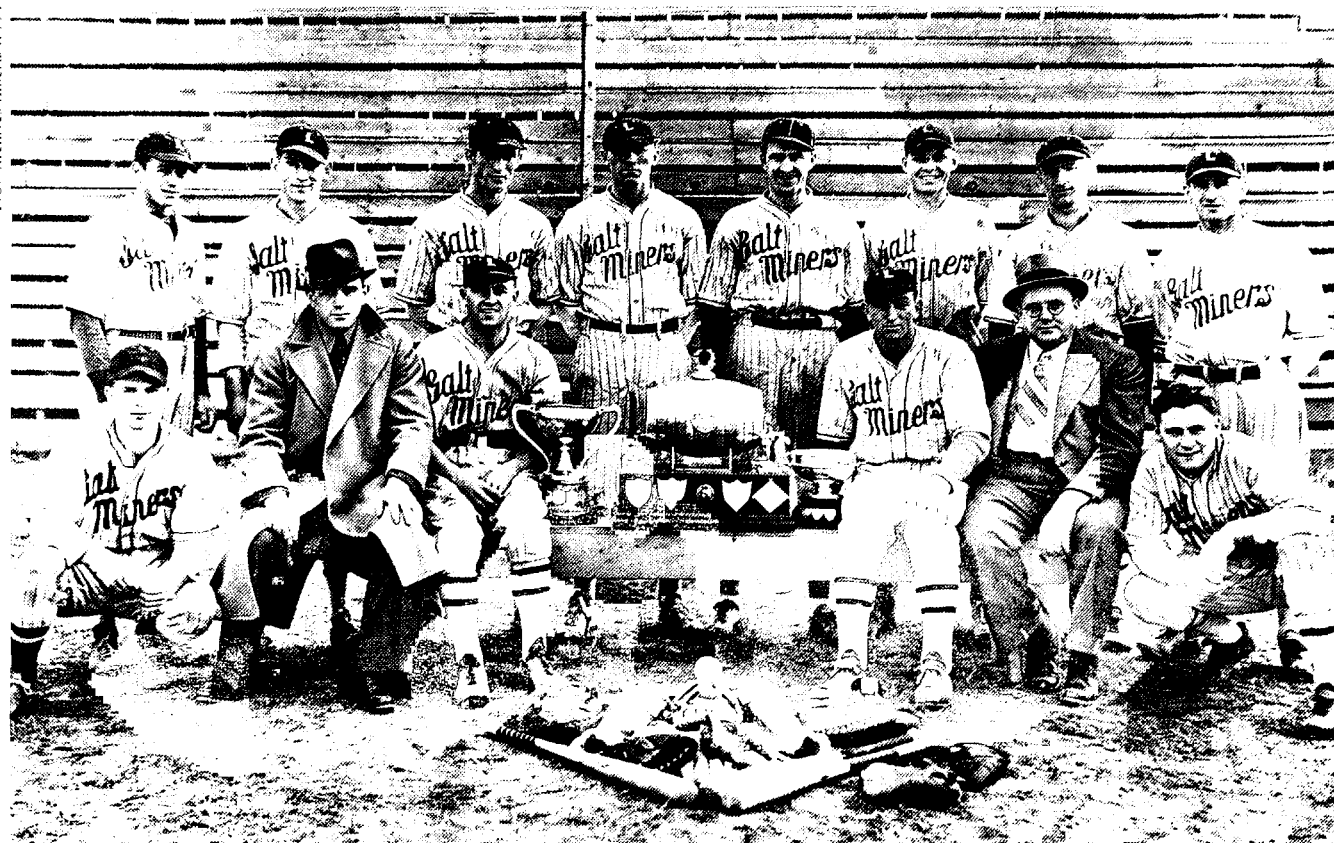
R.22

R.21

R.20W.4M.



The Lethbridge Coal Field (Plains Region) is shown in outline, above. Drawn by draftsmen of the Energy Resources Conservation Board, Calgary, the borders are effective from 1 April 1988. Currently, estimated coal reserves in this area are 487 million tonnes. The Pothole Isolated Deposit, which lies south of the city, is not included on the map. An outline of the City of Lethbridge has been added by means of an overlay, which was prepared by David Baines.



Miners needed relaxation. Two methods of attaining this were to organize a band (above) or a baseball team (below). Unfortunately, there is very little information on either of these groups in the Galt archives. The band was not the first such organization but probably dates to the first decade of this century. The baseball team won the Senior Baseball Championship in 1936; the late George Onofrychuk is standing, second from the left.

The year 1893 was a significant one at Lethbridge. It was the best year so far for the company even though from 1888 to 1896 the Canadian economy was depressed and there were few markets for coal. But after 1893 total tonnage and sales of coal from the Lethbridge mines fell off and did not recover until 1898 when output reached 152 643 tonnes, increasing to 218 193 tonnes in 1905. The Incline shut down on 15 May 1893 and signalled the end of the riverbottom drift mines. Seventy-five persons, including 50 miners, were affected although all but about 15 were absorbed elsewhere in the Galt organization. Finally, Sir Alexander Galt died on 21 September 1893. The *Lethbridge News* said, "Sir Alexander Galt deserved well from the people of Canada as a whole, but there are some parts of it which have particularly benefited by his abilities. Among these was the Town of Lethbridge, which owes its very existence to the dead statesman. That large deposits of coal existed in this district was well known to many before Sir Alexander Galt undertook the task of forming a strong company to develop and work the mines. It was no easy task to induce a large amount of English capital to be ventured in such an undertaking. But Sir Alexander Galt had peculiar advantages. His residence and financial dealings on behalf of the Canadian government in London had placed him in touch with the great English capitalists by whom his financial ability was fully recognized."

Galt No. 1 shaft closed on 5 March 1897. As a result

a large number of miners, principally recently-employed Hungarians, left for the Kootenay country and new opportunities there.

The abandonment of the riverbottom drift mines in 1893 implied a new devotion of the Galt companies towards large-scale exploitation of the coal resources at Lethbridge. But worldwide depression and coal markets that never quite lived up to expectations plagued the operation. Colonization was proceeding, albeit slowly, and the CPR, as the only major commercial market in the region, essentially dictated what the Galt mines would produce and how much they would receive for their product.

All of this changed around the turn of the century. The worldwide depression ended, in part because of massive gold discoveries in South Africa and the Klondike. Settlement of the western prairies finally got underway accompanied by a booster mentality that thought anything was possible. Locally, the Galt company's new 48 600-ha irrigation project was the first area to be settled and farmed. By 1905 dry farming techniques had become widely known and settlement of the dryland--the so-called Winter Wheat Lands--was well underway. Railway lines were laid into the newly-settled lands and many small towns developed. The coal mines of the Lethbridge area began to proliferate, as will be shown on the following pages.

But first we will discuss briefly the 20th century rise and fall of Lethbridge's coal industry.

Lethbridge Colliery, Alberta, N.W.T. 1885 And Previous Years

In the Lethbridge colliery there are two seams of coal separated by a thin layer (about one inch) of slate.

These seams are undulating and very regular, their combined thickness being about five feet two inches.

The system of working is that of laying off "rooms" at right angles to the double "entries" (each being nine feet wide) which are driven "over the butt" of the coal.

The "rooms" are run nine feet wide a distance of 15 feet back from the "entries" when they are then widened out to 20 feet. By this means all the coal is extracted, leaving pillars 15 x 24 feet along the sides of the "entries" to support the roof.

The company has introduced six American coal mining machines and two air drills; these machines greatly facilitate the mining and enable the company at any time to greatly increase their output, should the demand require it.

The power employed to work the machines is

compressed air manufactured by a Norwalk compressor 20-inch cylinder with 24-inch stroke and weighs about 15 tons. In connection with this compressor, there are three reservoirs for storing the air, about 5,000 feet of five-inch main pipe and about 5,000 feet of one-and-a-half-inch pipe for the purpose of conveying the air to the various workings of the mine. The compressor is situated in the same building with a 60 H. P. hoisting engine, which hauls the trucks out of the valley, 2,200 feet up an inclined railway on to the "Bankhead", where the coal is dumped into chutes and discharged into the railway cars, which stand on scales below. Compressed air is also utilized for pumping water out of the mines, running the emery wheel for sharpening tools and [running] the forge in the blacksmith's shop. Three large tubular boilers are employed for making steam for the hoisting engine and compressor.

Total expenditures during the year [1885] on Capital Account amounts to \$38,283.00 while Working Expenditure was \$177,480.00.

Total expenditure up to 31st December 1885 [presumably from April 1882] on Capital Account amounts to \$175,180.52 while the Working Expenditure up to the same date amounts to \$201,323.85.

C. A. Magrath
Lethbridge, Alberta



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Nicholas Sheran (1841-1882) packed a lot of living into his 41 years. Born in New York City, he apprenticed as a printer, then spent several years on Arctic whalers. He served in Company C of the 99th Regiment, New York National Guard, as a second lieutenant and saw service during the Civil War. During his time in the Army, Sheran met a soldier named Joseph Healy and, after hostilities ceased, he accompanied him back to Montana. There he became involved with John Jerome Healy, Joseph's older brother, and even in 1866 somewhat of a legend on the Montana frontier. Sheran became an Indian fighter, prospector and trader.

About June 1874 he came to Fort Whoop-Up, an American whiskey-trading post established in 1869 by Alfred Baker Hamilton and Johnny Healy. Sheran likely was familiar with the place and may have visited the post on occasion. He drew on the boating skills acquired as a boy on Arctic whalers and established a ferry service, consisting of two flat-bottomed rowboats, across the Belly River about 750 m northwest of the fort. He grubbed coal from a 45-cm seam in his spare time, selling the surplus to the Whoop-Up traders.

The North-West Mounted Police established the first Fort Macleod on an island in the Old Man's River on 13 October 1874. Sheran saw a larger market for his coal and moved downriver to The Coal Banks when a 1.5-m thick seam was exposed. By December NWMP work parties were hauling coal from Sheran's mine.

Sometime in 1877 Marcella Sheran (1844-1896) left New York and travelled to Fort Benton, then on to the Belly River country in the North-West Territories. [It has been impossible to document any of this as her name simply does not appear in obvious sources such as the Fort Benton Record or the Macleod Gazette.] After her arrival, she proved to be a valued partner to her brother as she had a sharp business sense and some book-keeping ability. She married Joseph McFarland of Fort Macleod on 4 July 1878 and went to live on his Pioneer Ranch.

In spite of vociferous opposition from his sister, after 1878 Nicholas Sheran lived common-law with a Peigan Indian woman called Mary Brown. Two children were born of the union: Charles, in February 1880; and William, in November 1882. Sheran never saw the second boy as he [Sheran] had drowned at Kipp's Crossing of the Old Man's River the previous May.

Marcella Sheran McFarland managed her brother's estate with considerable skill until her death from pneumonia in October 1896.

For additional information on Nicholas Sheran and his sister, Marcella, see Johnston (1983).

William Stafford

William Stafford, the son of an English mining engineer and geologist, was born in Patna, Scotland, in 1842. After a Scottish education, he followed his father's calling. In 1867, he emigrated to Westville, Nova Scotia, to manage the coal mines of the Acadia Coal Company. In 1882, he was engaged by Sir Alexander Tilloch Galt to accompany Captain Nicholas Bryant to the West to assess coal mining possibilities there.

As the only practical coal mining engineer in the party, Stafford's counsel carried much weight when Sir Alexander and Elliott Torrance Galt and Bryant met to choose between opening a mine at Blackfoot Crossing, near modern Gleichen, or at the Coal Banks. Stafford opted for the latter because of the quality of the coal. Thus Lethbridge was born.

The actual location of the future city was dictated when, on 13 October 1882, Stafford decided to open a drift mine on the east side of the Belly (now Oldman) River at a point just north of today's CP Rail High Level Bridge.

Stafford supervised the opening of drift mines Nos. 1 to 9 and shafts Nos. 1 to 3. In 1894, he became Inspector of Mines for the District of Alberta and was followed as Mines Superintendent by William Duncan Livingstone Hardie. By this time, Stafford had become interested in ranching and resigned from the Galt company to follow that pursuit. A spacious ranch home, which became a community and social centre, was built in the river-bottom in what is now Peenaquim Park.

William Stafford died on 12 May 1907 and was buried in Mountain View Cemetery.

cent of the time at a production level which was only 40 percent of that in 1928. Six years later, in March 1945, miners worked only two days per week.

Alberta and Lethbridge recognized its coal pioneers on 18 July 1928 when a National Sites and Monuments Board of Canada marker to honor Nicholas Sheran was unveiled in Galt Gardens and a special issue of the Lethbridge Daily Herald was printed. The Lethbridge Historical Society worked for a full year on plans for the impressive ceremony.

The Great Depression of 1929-1939 turned out to be a particularly desperate time for Lethbridge's coal industry. The onset of the depression was brought home to Lethbridgians as early as August 1929 when miners in large numbers began to be laid off for lack of demand for coal. On 28 October, Lethbridge's city council met in emergency session to consider the mounting problems of unemployment and the many demands for relief.

Alderman Andrew Smeaton, labor representative on council, said that unemployment in the coming months would be serious and widespread. Smeaton forecast serious unemployment among Lethbridge miners for two reasons: the winter so far had been mild and little coal had been ordered or consumed, and there had been much con-

version to natural gas. In the United States, the Smoot-Hawley tariff act of 17 June 1930 added a 75-cent surcharge per ton (82 cents per tonne) of imported coal, effectively cutting off that market. As the depression wore on, Saskatchewan, traditionally one of Lethbridge's most assured markets, turned increasingly to its own lignite fields in the Weyburn-Estevan region. All of this compounded the local problem.

The population of Lethbridge averaged about 13,500 during the depression years. There were about 1,000 unemployed persons, mostly coal miners with wives and families, on relief by 3 June 1931. From 1932 to 1939, inclusive, the number of unemployed persons on relief averaged about 2,000 per year. Robert Livingstone was called on to head up relief camps at the exhibition grounds, Warner and elsewhere. The reality of the Great Depression, in Lethbridge as elsewhere, was that an unemployed person could not find any kind of job in any type of work at any rate of pay anywhere. Unemployment Insurance was unknown. Relief, now called welfare, was for many the only hope, the only bulwark against destitution, even actual starvation.

On 20 April 1935, Andrew A. Millar, chief inspector of mines, Edmonton, was notified by general manager Robert Livingstone that a field merger of local coal companies had come into force on 1 April. (Millar had been aware of the corporate restructuring since 22 January 1935 but lacked specifics.) The merger was undertaken with the idea of closing unprofitable operations and amalgamating sales and executive forces so as to reduce overhead and to draw together an organization that could be operated profitably.

The change in ownership affected Galt Mine No. 8 at Lethbridge, formerly owned by the CPR, the Lethbridge Colliery at Coalhurst, formerly owned by Royalties Oil & Shares Corp. Ltd., and the Standard Mine at Shaughnessy and Federal Mine at Lethbridge, formerly owned by the Cadillac Coal Co., Ltd. These properties were united under one company incorporated as the Lethbridge Collieries, Ltd., with head office in Calgary and mine office in Lethbridge. Officials of the new company were: directors--Samuel G. Porter (president), E. A. Lovett, Wm. Toole, Christopher S. Donaldson, and A. E. Whitmore; general manager, Robert Livingstone; secretary-treasurer and sales manager, Benjamin Tyler Coon; mine managers--Galt Mine No. 8, Robert Livingstone; Lethbridge Colliery, John Marshall Davidson; and Standard and Federal Mines, Christopher Storrar Donaldson. "Galt Coal," "Cadillac Coal," and "Imperial Coal" were retained as brand names since they had widespread customer recognition and acceptance.

Benjamin Tyler Coon, an official with the CPR Natural Resources division for many years, succeeded Robert Livingstone upon the latter's retirement in 1938. Ben Coon died in office on 20 September 1943 and was succeeded as general manager by C. S. Donaldson, director of Lethbridge Collieries since the 1935 field merger. Donaldson retired on 31 March 1946 and was followed by John M. Davidson. And on 1 October 1956 Davidson was replaced by R. Donald Livingstone, a son of the first general manager, Robert Livingstone. After closure of the last Galt mine, Livingstone continued as general manager of



Entrances to Drift Mines No. 1 (right) and No. 2 (left) in 1885. William Stafford and 15 Nova Scotia miners began to drive these drifts on 13 October 1882. They closed in 1893.

the old workings to retrieve rails and other equipment left in the mine at the time of abandonment.

The AR&ICo's Galt Mine No. 6 was completed in November 1908 and development of the plant and mine was carried out on a large scale. A tippie with four loading tracks and one bypass track was installed and was fully equipped to handle 1634 tonnes of coal in eight hours. When development of a new mine was being contemplated around 1907-1908, the AR&ICo had 3240 ha of proven coal lands centred on Sec 2, Twp 9, Rge 22 at

the west end of what became the CP Rail High Level Bridge. (A shaft was sunk on the property in 1934 and became Galt Mine No. 8.) Delays in the completion of the bridge project because of the 1908 floods forced the company to act. It opted to sink the new shaft at what became the village of Hardieville instead of on the west side of the river opposite Lethbridge.

Galt No. 6 underground workings (located in Lsd 15, Sec 18, Twp 9, Rge 21) were discontinued on 14 March 1935. Its equipment was withdrawn and the mine was

31 October 1885 Letter Home

The following letter was written by a visiting minister to his ten-year old son. He was in Lethbridge trying to set up a Presbyterian mission under the direction of Rev. W. P. MacKenzie.

"My Dear Son

"Lethbridge is on the east bank of the Belly River. It is about 100 miles from Medicine Hat and 25 miles from Fort Macleod. To the west the Rocky Mountains can be seen for 150 miles. All the mountains are covered by snow although the weather here is dry and warm. Lethbridge is only two months old and yet there is a population of about 1,000 they say. The place gets its importance from the coal mines. The coal seam runs along the river on both sides. The prairie is about 200 feet higher than the river flat and hence there is a layer of about 200 feet of earth and rock above the coal. They work the coal in from the bank of the river. They dig in galleries and blast out the coal with powder. The seam is about 5 ft 2 in thick. They take all this out, break

it into lumps and put it in cars (small cars that hold about a ton each) and they have mules and horses to haul it out from underground. I was in the pit and let me tell you what I saw. We went in by a passage which was at first about 6 ft high. This passage was cut in the coal seam. They cut out the coal from these [passages] and then cut galleries away from them. They leave a large pillar of coal between the passages to support the roof. When they cut away to the back of the galleries they begin to take out coal from between the galleries and put in posts to support the roof. Of course the mine is all dark and the men work with a lamp hung on their caps in front. In cutting coal they cut along one side and cut out below the galleries. They leave a hole and put in a charge of powder and fire it off and a good deal of coal comes down. This they load on the cars. The picks they use are small and sharp and they get them sharpened several times a day. Two men work in each gallery and between them they have eight picks. When one gets dull they take another and then take them all out at noon or night to be sharpened.

"The men get \$1.25 per ton for taking out the coal. Each miner can dig from 2 to 3 tons per day and there are 86 of them. They are taking out over 200 tons a day now."



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Thompson, John 1890.12.17
Unnamed Indian boy 1892.02.01
[fell from coal car; run over on incline]
Ursulok, Nick 1919.11.14
Vanning, Adam 1906.09.28
Voytko, Istvan 1931.03.21 [aka Steve Voytko]
White, Charles 1935.06.30

Williams, Eben 1935.12.09
Workman, James 1935.12.09
Zancarino, Peter 1906.09.28
Zanotel, Angelo 1944.06.15
Zmurchyk, Nykyfor Kyfa 1935.12.09
[aka Zmurchuk, Zonurchuk]
Zubery, John 1943.08.09 [aka Zubray, Zubry]

Mine Accident Notes

Many miners in the Lethbridge coal mines were of foreign birth. Their names tended to look and sound strange to WASP eyes and ears. The result was that names of individuals of, for example, eastern European origin were often misspelled in newspaper accounts and in mine inspector reports. Further, many were called "Nick," "John," "Pete," "Steve" and the like simply because their proper Christian names sounded vaguely like these.

Another way that names were changed was told to us by R. Donald Livingstone. The "Lamp" book, in which the identifying brass discs carried by the miners into the mine were recorded, had columns that sometimes did not accommodate long names. Occasionally when the recording lamp man wrote in the name he came to the end of the column and had a few syllables left over. These were simply discarded. The names as recorded found their way into the payroll department and checks were issued using the shortened name. This became the basis of a bank account and a changed surname resulted.

We attempted wherever possible to obtain correct names, usually from coroners' reports, but included other versions of the name following the notation "aka" [also known as].

We have interpreted "fatal accidents" rather broadly to include those persons who died in a mine or on mine property. Some of the deaths we listed involved natural causes of one sort or another, others were accidents but did not involve mine employees.

Edward Coe farmed about a mile away from the Coalhurst mine, where he had once worked. Coe walked home from town late in the evening of 1926.02.05. He had been drinking heavily for some time and was thought to have been intoxicated when he headed for his farm. He apparently stopped at the mine site and entered a building that housed a fan assembly. The building was poorly ventilated and tended to become very hot, possibly up to 140F (60C) or more according to evidence given at the inquest. Coe lay down in the hottest part of the room and, according to an autopsy report by Dr. W. S. Galbraith, literally "cooked" to death.

All deaths dated 1935.12.09 refer to the 16 victims of the Coalhurst mine explosion. The three Gresls were brothers. A fourth brother, Charles Gresl, discovered at least one of the bodies. (See Walker, 1984.)

Those deaths dated 1943.08.09 referred to the four victims of the Kerralta mine explosion.

Chester Gonczy, aged 19, was working alone while operating a drum and cable device when his clothing caught on the cable. He was pulled onto the drum and killed.

James Koncs, an employee of Galt No. 8 mine, died a few minutes after getting off the Miners' Bus near his

home in North Lethbridge. Rumors spread that he had worked all day in a badly ventilated room and that his partner had been ordered to the hospital as he was very sick. A post-mortem examination and investigation proved that Koncs died from a heart condition and that the partner had an attack of the 'flu. (A later report, not available at the inquest, showed a 20 percent saturation of carbon monoxide in Koncs' blood. Koncs' partner, in a sample taken on the same day, showed no carbon monoxide in his blood.)

The death of Allan R. MacDonald was sheer chance. He had been hired by Peter Jones to operate Mine No. 0750. He went to the mine on Sunday to look over work in progress. He was not on duty. A drum, travelling at high speed, disintegrated and a piece of pipe hit MacDonald on the left temple, killing him instantly. He was 42 feet [12.8 m] away, standing in the doorway of a bunkhouse at the time of the accident. Chris S. Donaldson was taken on as mine manager in his place.

George McLeod may have been murdered by a co-worker. He had come to work surly and quarrelsome and was later found lying dead in a mine passage. There were three distinct injuries to his head but no readily discernible way that they could have been caused accidentally. The supposition seemed to be that someone had hit him with a pick although this was never formally stated.

William McLeod was employed as a carpenter with Royal Collieries. He fell off a lumber wagon and was run over by a rear wheel. There was a suggestion that the cause was giddiness, a mild heart attack or the like.

The Olshaskis were cousins.

Joseph Pieschuk was operator of the Red-Bird mechanical loader at Galt No. 8 mine and died in the mine. A pathologist found death was due to a massive heart attack.

The same spelling was adopted for the Pentelichuks although it was frequently spelled differently. Pete Pentelichuk [Pentelecuik] was found in the mine lying dead beside a coal car. No cause of death was established.

William Robertson worked in a west side mine but lived on the east side of the river. The company provided a rowboat to transport such employees back-and-forth. On one trip the boat was swamped by a sudden gust of wind, which created a high wave. Robertson was thrown into the water and drowned.

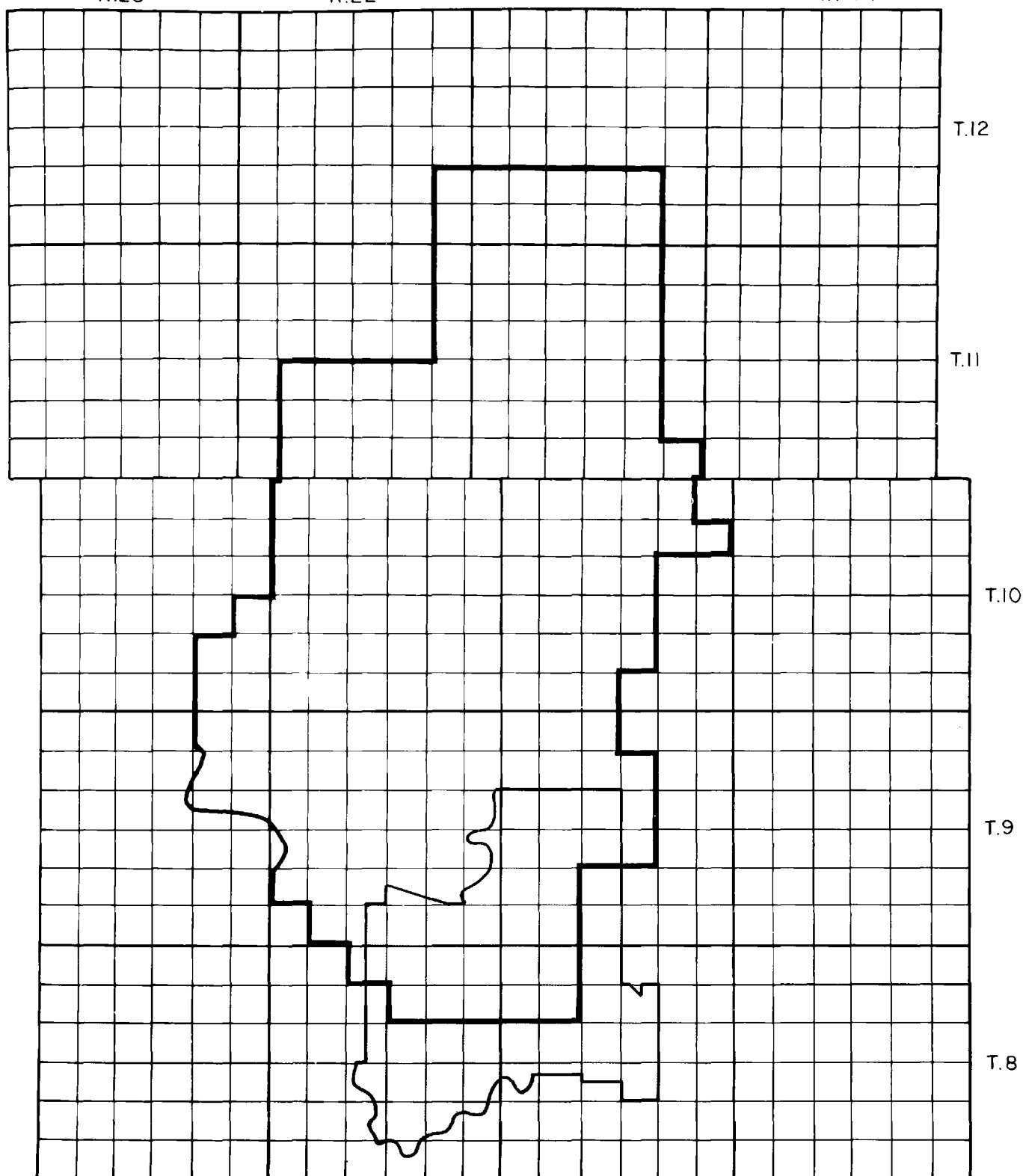
George N. Thompson and Fred Rush were employed by John Gunn & Sons of Winnipeg, who built the concrete structures for the CP Rail High Level Bridge. Both were asphyxiated while trying to rescue nine-year old George Anderson from a gas-filled excavation, dug to investigate old Galt mine workings, between Piers Nos. 21N and 22N.

R.23

R.22

R.21

R.20W.4M.



The Lethbridge Coal Field (Plains Region) is shown in outline, above. Drawn by draftsmen of the Energy Resources Conservation Board, Calgary, the borders are effective from 1 April 1988. Currently, estimated coal reserves in this area are 487 million tonnes. The Pothole Isolated Deposit, which lies south of the city, is not included on the map. An outline of the City of Lethbridge has been added by means of an overlay, which was prepared by David Baines.

Sir Alexander Galt Dies

Montreal, September 19 [1893].--Sir Alexander Tilloch Galt, G.C.M.G., D.C.L., died at 3:30 this morning. The deceased gentleman was one of the most prominent men in Canadian politics prior to, and for some time after, confederation, and was the first occupant of the position of High Commissioner for Canada in England, the position now filled by Sir Charles Tupper.

Sir Alexander Tilloch Galt, son of John Galt, the author, by Elizabeth, daughter of Dr. Tilloch, was born at Chelsea, September 6, 1817, and educated in England and Canada. He was in the service of the British and American Land Company from 1833 to 1856, and commissioner and manager of their entire estates from 1844 to 1856. He was first elected to the Canadian parliament in 1849. The governor general, Sir E. W. Head, requested him to form an administration in August 1856. This task he declined, though he joined Mr. Cartier's administration as finance minister, and held that office until the ministry was defeated on the Militia bill in May 1862. Sir Alexander resumed his post as finance minister in March 1864, and retired in August 1866, when the cabinet failed to carry a measure securing educational privileges to the Protestant minority in Lower Canada, in view of the greatly increased powers obtained by the French and Roman Catholic majority under confederation. Mr. Galt felt that, as the representative of the Protestants of Lower Canada, he could best serve their interests by retiring. The results appear to have justified his views. He was appointed a delegate for Lower Canada, to confer with

the Imperial government on the subject of confederation, and in that capacity, although not a member of the Canadian government, he secured protection for his co-religionists. On the confederation being affected he was appointed minister of finance in the new Dominion government, and held that office from July 1 till November 4, 1867, when for private reasons he resigned.

Sir Alexander was regarded as the ablest financier in the colonies, and had taken a prominent part in all measures adopted to unite and consolidate British America. He was created a knight commander of the order of St. Michael and St. George in 1869, for his long official colonial service. In July 1875 he was appointed a commissioner on behalf of Great Britain, under treaty of Washington, May 1871, and more recently he acted as a member of the Halifax fisheries commission. He was nominated a GCMG, May 25, 1878. Sir Alexander was appointed high commissioner for Canada, in England, in 1880, and was delegate for Canada at the International Monetary Conference in Paris in 1881. He was a member of the executive and general committees of the great International Fisheries exhibition in 1883. In 1883 he resigned his high commissionship and returned to Canada.

In 1882 he established the North Western Coal and Navigation Company, Limited, which opened at Lethbridge the first coal mines in the North-West Territories as a commercial enterprise; and in 1885 constructed 109 miles (175 km) of railway, connecting the mine with the CPR.

The Lethbridge News 21 September 1893

working. [Cost of timber props to support the roof was an expensive item, averaging about ten cents per tonne of coal produced. Thus, in June 1882, the Galts established a sawmill about 48 km northwest of Fort Macleod in the Porcupine Hills to produce mine props and milled lumber.]

The cars of coal hauled to the top of the Incline were taken to the Bankhead, where they were tipped over screens, the various classes of lump, nut and screenings being sorted out and landed in three separate cars standing on parallel tracks under the screens. The Incline had a double track, and on each trip a rake of five cars holding about a tonne of coal each was taken up, a rake of five empties being sent down at the same time. A trip was made in three minutes. At the Bankhead a colliery car of coal was dumped over the screens every 45 seconds during working hours. Mining from the shafts was the same as from the drifts except that entries were started from the bottom of the shaft instead of from the river bank. As the loaded colliery cars came back to the bottom of the shaft they were pushed one at a time on to an elevator platform and were carried to the top of the shaft, 91 m, in 20 seconds.

A large quantity of machinery was used in connection with the colliery, including several 60 and 100 HP steam engines with boilers, hoisting drums, and cages. A smaller engine was used to pump water out of the shafts. Legg mining machinery was used to undercut the face, after

which miners shot down the coal with black powder and loaded it on to mine cars. Legg cutting machines operated on compressed air brought in from a compressor at the head of the Incline.

It is not generally known that the Galt company set up the town's first waterworks system in 1883. It was designed to wash coal from the drift mines but, in 1885, a pipeline was run up the coulee hill to a water tank at the roundhouse. The line was then extended to a hydrant at the corner of 1st St and 1st Ave S. Horse-drawn 2275-L water tanks loaded up here and their drivers filled barrels at all homes and businesses. Also nine underground 68.2-m³ water reservoirs were built in the downtown area for fire fighting purposes. The company water line eventually was extended to Galt No. 3 Mine. It was replaced by the modern civic waterworks, opened on 1 January 1905.

The company produced 20 865 tonnes of coal in 1885, its first year of operation with a transport system in place. In 1893, output was 726 tonnes a day or 145 149 tonnes for the season, for all of which there was ready sale. The Galt seam being worked at Lethbridge contained 20 180 tonnes of coal under each hectare. About half could be extracted, the rest was left as supports for the main galleries and as waste. About 101 ha had been worked out by 1893.

Appendix 3

Entrepreneurs, Partnerships & Companies

- Adams & Sons, #223
Adams Coal Mine Co Ltd, #223
Albert Dupen & Son, #203
Albert Firth & Co, #733
Alberta Railway & Coal Co, #3
Alberta Railway & Irrigation Co, #3
Alfred Ruffell & Partners, #1109
Arthur J. Pitt & Partners, #750
Ashcroft & Whitney, #54
Ashcroft, James, #54
Atkinson, J. T., #889
B. T. Wall & Partners, #1020
Bachelor, MacIntyre & Dykstra, #1045
Baker, Roscoe J., #56
Baker, Thomas H., #56
Baker, Thomas R., #56
Bateman & Gent, #988
Bateman & Son, #988
Bateman, Blasco & Brearley, #1423
Bateman, Degaust & Blasco, #871
Bateman, Degaust & Cherwinski, #871
Bateman, James, #988, #1219
Bathurst Mining Co Ltd, #372
Bembridge & Jackson, #1045
Bembridge & Meredith, #1045
Bembridge & Oswald, #1045
Bembridge, Arthur, #56, #984, #1045
Bembridge, Jackson & Kurtzvey, #1045
Benadetti, Joe, #674
Black Diamond Coal Co, #104
Blair, John, #983
Blasco, Bateman & Brearley, #1423
Blasco, Brearley & Bateman, #1423
Bonetti & Cattoni, #55
Bonetti & Partners, #55
Bonetti, Cattoni & Cattoni, #1086
Bonetti, Passoli & Pederzolli, #55
Botcher, Rudolph B., #750
Bourne & Scott, #1150
Bourne, George, #993, #1150
Bradshaw Mining Co, #176
Brearley & Blasco, #1423
Brearley & Chester, #1095
Brearley & Hamilton, #1423
Brearley, George, #1423
Bridge Mining Corporation Ltd, #1762
Briscoe, Frank, #55
Bullock & Philips, #104
Bulwell Coal & Iron Mining Co Ltd, #104
C. S. D. Coal Co Ltd, #1762
C. S. Donaldson Coal Co, #54, #992
Cadillac Coal Co Ltd, #54, #1464
Canadian Coal & Coke Co Ltd, #174
Canadian Pacific Railway Co, #3, #1464
Cascade Coal Co, #713
Cattoni & Bonetti, #1086
Cattoni & Filestino, #1086
Cattoni & Perini, #1086
Cattoni & Rota, #1086
Cattoni & Van Haute, #1086
Cattoni, Bonetti & Cattoni, #1086
Cattoni, Cattoni & Chemotti, #1086
Cattoni, Chemotti & Van Haute, #1086
Cattoni, Chemotti & Viola, #1086
Cattoni, Filestino & Van Haute, #1086
Cattoni, Perini & Viola, #1086
Cattoni, Silvio, #1086
Cattoni, Viola & Rota, #1086
Central Coal Co of Lethbridge Ltd, #1092
Challenger, E. J., #750
Chemotti, Cattoni, Viola & Van Haute, #1086
Chester, Crabb & Chester, #1095
Chester, J. C., #1095
Chinook Coal Co Ltd, #647
City of Lethbridge, #192
Clark & Partners, #1020
Coal Producers Ltd, #174
Consolidated Diamond Collieries Ltd, #104
Cox & Paris, #1020
CPR Department of Natural Resources, #3
Crawford & Partners, #761
Crawford, James & Spencer, #701
Crawford, Robert, #761
Degaust & Nelson, #1109
Degaust, Rawley & Fisher, #1423
Degaust, Rawley & Garrett, #1423
Denboer & Lerohl, #750
Denboer, Henry, #395
Denboer, Patterson & Smith, #750
Diamond Coal Co Ltd, #104
Diamond Sunrise Coal Co, #276
Donald & William McNabb, #104
Donaldson & Tennant, #54
Donaldson, Adam G., #1762
Donaldson, Christopher S., #605, #750, #1263
Dumphy, A. A., #1095
Dupen, Albert E., #203
Dupen, Harold A., #203
Dupen, Krossa & Wilkie, #203
Dupen, Krossa, Susnar, Miskulan & Koshman, #203
Dykstra & Bachelor, #1045
E. H. F. Warren & Partners, #983
E. J. Challenger & Miller, #984
E. J. Challenger & Sons, #984
E. J. Challenger and Sons & Gibson, #984
Edward Oliver & Sons, #56
Erickson, Gerhard, #674
Evans, Hugh, #893
Farm Security Co, #223
Farrar, Henry, #1066
Federal Coals Ltd, #54, #104, #713
Fording Coal Ltd, #1789
Forsyth & Allan, #1086
Forsyth & Partners, #1086

Forsyth, Arnold & Varga, #1086
 Forsyth, Fairbanks & Varga, #1086
 Forsythe, Fairbanks, Varga & File, #1086
 Galvin & Glass, #225
 George Loxton & Co, #55
 George Rollingson & Son, #889
 Gibson & Son, #1020
 Gibson and Son & Roggero, #1020
 Gibson, Gibson & Mickoli, #1020
 Gibson, Joseph, #1020
 Gillespie, Francis, #162
 Gonczy & Partners, #750
 Grace, Arthur M., #54
 Gust & Morris Nordblad, #1045
 Hagblad, Nelson & Lund, #1109
 Hamilton & Stobbs, #713
 Hamilton & Varga, #1423
 Hamilton, George, #1109, #1110
 Hamilton, Glen F., #1423
 Hamilton, James F., #871
 Hamilton, John K., #92, #713, #761, #821, #1046
 Hamilton, Wm. L., #1095
 Hannah, J. O., #104, #759
 Hannah, Mrs G. G., #674, #759
 Harker & Welsh, #984
 Harker, Nagy & Nagy, #984
 Harold Dupen & Partners, #203
 Harrison, Stephen, #54, #638, #836
 Harvie & Gray, #750
 Hauschild, Ferdinand, #889
 Heighes Bros., #254
 Heighes, George, #254
 Henderson & Shaw, #674
 Henry Nelson, Noble & Son, #750
 Holton & Kemp, #55
 Holton & Mickoli, #55
 Holton & Minor, #55
 Holton, Joseph, #55
 Holton, Minor, Varga & File, #55
 Holton, Munroe & Kemp, #55
 Houk, George, #56
 Hughson, H. B., #984
 Hutton Coal Co, #1092
 Idemitsu Kosan Co Ltd, #1789
 J. J. Hamilton Co, #54, #1577, #1581
 J. J. Hamilton Coal Co Ltd, #54, #1577, #1581
 James Bateman & Son, #988
 James Perry & Son, #161
 Jaynes, William, #162
 Jones, Peter, #750
 Joseph Gibson & Son, #1020
 Joseph Gibson and Son & Roggero, #1020
 Kerr, James G., #1576
 Kerralta Coal & Brick Co, #1576
 Kerralta Coal Co, #1576
 Kerrison & Bill, 1020
 Kerrison & Clark, #1020
 Kerrison & Larson, #1020
 Kerrison & Son, #1020
 Kerrison, Thomas W., #1020
 Keystone Collieries Ltd, #836
 Kocsis & Varga, #1086
 Kocsis, Varga, Nemeth & Kovacs, #1086

Kocsis, Varga, Nemeth, Kovacs & Berke, #1086
 Koskewick & Pashkiwski, #1109
 Lazzarotto & Negrello, #750
 LeBlanc & Partners, #104
 Lethbridge Central Coal Co, #1092
 Lethbridge Co-operative Miners' Association Ltd, #1219
 Lethbridge Coal Co Ltd, #674
 Lethbridge Collieries Ltd, #54, #174, #1263, #1464
 Lethbridge Collieries, #174
 Lethbridge Land & Coal Co, #674
 Lethbridge Social Credit Co-operative Miners' Association Ltd, #1219
 Loxton & Miller, #984
 Loxton & Partners, #55
 Loxton, George, #55, #1086
 Loxton, Minor, Varga & File, #55
 Loxton, Razzolini & Filestino, #56
 Loxton, Varga & Chemotti, #55
 Loxton, Varga, Minor & File, #55
 Luck & Wheatcroft, #750
 Lund, Hagblad, Nelson & Sadlis, #1109
 Lund, Nelson & Degaust, #1109
 Lund, Nelson & Hagblad, #1109
 Lund, Nelson, Hagblad & Degaust, #1109
 MacDonald & Fisher, #254
 MacDonald, Allan A., #750
 MacDonald, Daniel R., #750
 Magrath Coal Co, #162
 Maguire, A. J., #343
 Malloy, Andrew, #395
 Malloy, Michael, #395
 McArthur & Allen Construction Co, #1602
 McClain & Meldrum, #1685
 McClain & Minor, #1685
 McClain, Bly & Conrad, #1685
 McClain, L. C., #1685
 McFarland, Joseph, #54
 McFarland, Marcella Sheran, #54
 McIlwaine, Robert, #889, #1045
 McKean, John W. & Raisbeck
 McNabb & Sharman, #1110
 McNabb, Donald, #993
 McWilliams & Partners, #217
 McWilliams, Alex, #217
 Miller & Miller, #984
 Miller & Partners, #984
 Miller, J. A., #984
 Miller, W. F., #984
 Minor & Varga, #1086
 Minor, File & Varga, #55
 Murray & Woodruff, #276
 Neil, Denboer & Patterson, #983
 Nelson & Degaust, #1109
 New Barnes Coal Mine Co, #203
 Nilsson & Tollestrup General Construction & Strip Mining, #1602
 Noble, John, #55, #750
 North American Collieries Ltd, #174
 North Western Coal & Navigation Co Ltd, #3
 Northern Coal Co Ltd, #1414
 Novotny & Kerrison, #750
 Novotny & Marasek, #750

William Stafford

William Stafford, the son of an English mining engineer and geologist, was born in Patna, Scotland, in 1842. After a Scottish education, he followed his father's calling. In 1867, he emigrated to Westville, Nova Scotia, to manage the coal mines of the Acadia Coal Company. In 1882, he was engaged by Sir Alexander Tilloch Galt to accompany Captain Nicholas Bryant to the West to assess coal mining possibilities there.

As the only practical coal mining engineer in the party, Stafford's counsel carried much weight when Sir Alexander and Elliott Torrance Galt and Bryant met to choose between opening a mine at Blackfoot Crossing, near modern Gleichen, or at the Coal Banks. Stafford opted for the latter because of the quality of the coal. Thus Lethbridge was born.

The actual location of the future city was dictated when, on 13 October 1882, Stafford decided to open a drift mine on the east side of the Belly (now Oldman) River at a point just north of today's CP Rail High Level Bridge.

Stafford supervised the opening of drift mines Nos. 1 to 9 and shafts Nos. 1 to 3. In 1894, he became Inspector of Mines for the District of Alberta and was followed as Mines Superintendent by William Duncan Livingstone Hardie. By this time, Stafford had become interested in ranching and resigned from the Galt company to follow that pursuit. A spacious ranch home, which became a community and social centre, was built in the river-bottom in what is now Peenaquim Park.

William Stafford died on 12 May 1907 and was buried in Mountain View Cemetery.

cent of the time at a production level which was only 40 percent of that in 1928. Six years later, in March 1945, miners worked only two days per week.

Alberta and Lethbridge recognized its coal pioneers on 18 July 1928 when a National Sites and Monuments Board of Canada marker to honor Nicholas Sheran was unveiled in Galt Gardens and a special issue of the Lethbridge Daily Herald was printed. The Lethbridge Historical Society worked for a full year on plans for the impressive ceremony.

The Great Depression of 1929-1939 turned out to be a particularly desperate time for Lethbridge's coal industry. The onset of the depression was brought home to Lethbridgians as early as August 1929 when miners in large numbers began to be laid off for lack of demand for coal. On 28 October, Lethbridge's city council met in emergency session to consider the mounting problems of unemployment and the many demands for relief.

Alderman Andrew Smeaton, labor representative on council, said that unemployment in the coming months would be serious and widespread. Smeaton forecast serious unemployment among Lethbridge miners for two reasons: the winter so far had been mild and little coal had been ordered or consumed, and there had been much con-

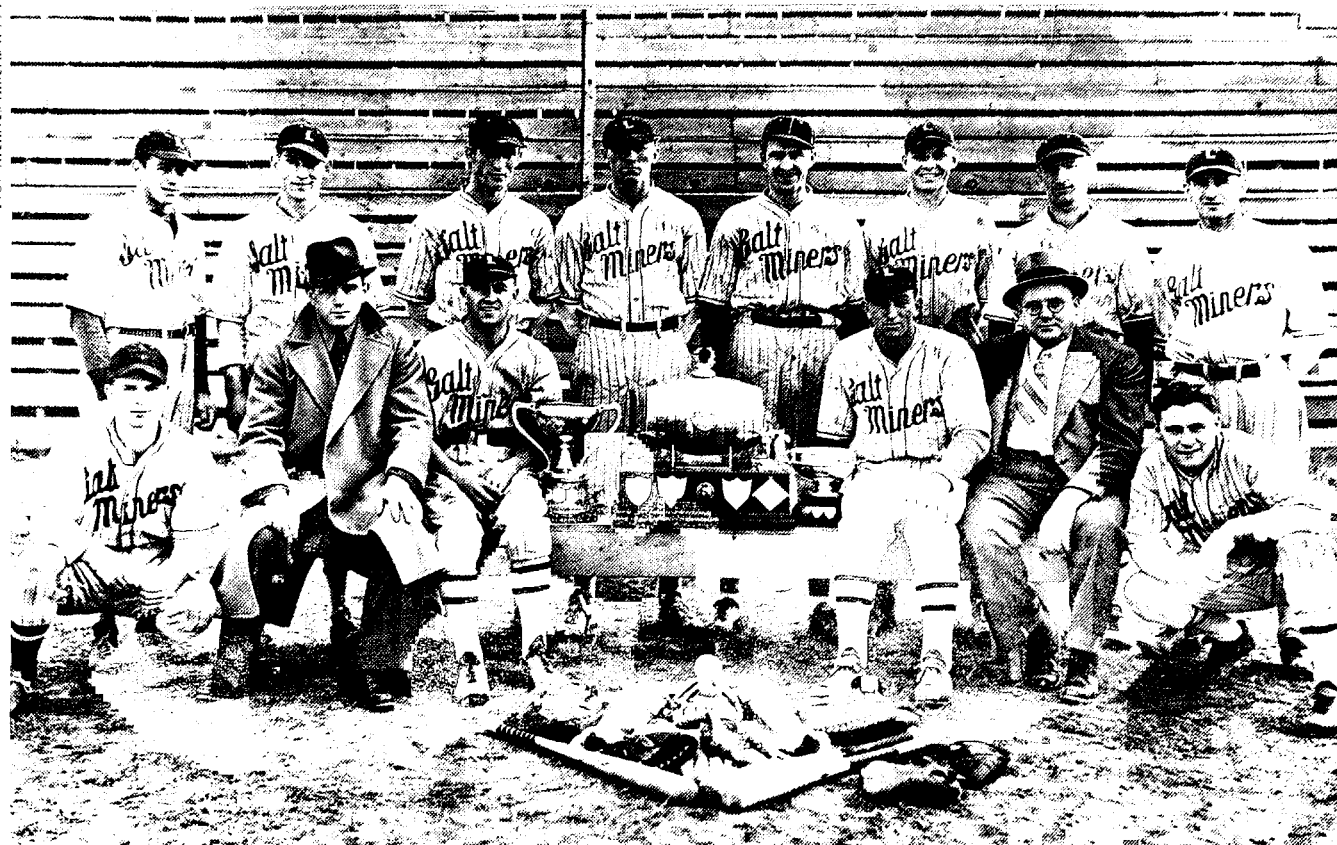
version to natural gas. In the United States, the Smoot-Hawley tariff act of 17 June 1930 added a 75-cent surcharge per ton (82 cents per tonne) of imported coal, effectively cutting off that market. As the depression wore on, Saskatchewan, traditionally one of Lethbridge's most assured markets, turned increasingly to its own lignite fields in the Weyburn-Estevan region. All of this compounded the local problem.

The population of Lethbridge averaged about 13,500 during the depression years. There were about 1,000 unemployed persons, mostly coal miners with wives and families, on relief by 3 June 1931. From 1932 to 1939, inclusive, the number of unemployed persons on relief averaged about 2,000 per year. Robert Livingstone was called on to head up relief camps at the exhibition grounds, Warner and elsewhere. The reality of the Great Depression, in Lethbridge as elsewhere, was that an unemployed person could not find any kind of job in any type of work at any rate of pay anywhere. Unemployment Insurance was unknown. Relief, now called welfare, was for many the only hope, the only bulwark against destitution, even actual starvation.

On 20 April 1935, Andrew A. Millar, chief inspector of mines, Edmonton, was notified by general manager Robert Livingstone that a field merger of local coal companies had come into force on 1 April. (Millar had been aware of the corporate restructuring since 22 January 1935 but lacked specifics.) The merger was undertaken with the idea of closing unprofitable operations and amalgamating sales and executive forces so as to reduce overhead and to draw together an organization that could be operated profitably.

The change in ownership affected Galt Mine No. 8 at Lethbridge, formerly owned by the CPR, the Lethbridge Colliery at Coalhurst, formerly owned by Royalties Oil & Shares Corp. Ltd., and the Standard Mine at Shaughnessy and Federal Mine at Lethbridge, formerly owned by the Cadillac Coal Co., Ltd. These properties were united under one company incorporated as the Lethbridge Collieries, Ltd., with head office in Calgary and mine office in Lethbridge. Officials of the new company were: directors--Samuel G. Porter (president), E. A. Lovett, Wm. Toole, Christopher S. Donaldson, and A. E. Whitmore; general manager, Robert Livingstone; secretary-treasurer and sales manager, Benjamin Tyler Coon; mine managers--Galt Mine No. 8, Robert Livingstone; Lethbridge Colliery, John Marshall Davidson; and Standard and Federal Mines, Christopher Storrar Donaldson. "Galt Coal," "Cadillac Coal," and "Imperial Coal" were retained as brand names since they had widespread customer recognition and acceptance.

Benjamin Tyler Coon, an official with the CPR Natural Resources division for many years, succeeded Robert Livingstone upon the latter's retirement in 1938. Ben Coon died in office on 20 September 1943 and was succeeded as general manager by C. S. Donaldson, director of Lethbridge Collieries since the 1935 field merger. Donaldson retired on 31 March 1946 and was followed by John M. Davidson. And on 1 October 1956 Davidson was replaced by R. Donald Livingstone, a son of the first general manager, Robert Livingstone. After closure of the last Galt mine, Livingstone continued as general manager of



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William Stafford, Senior

domestic coal producing centre in Alberta. The building of the CPR Viaduct (now the CP Rail High Level Bridge) over the Belly River opened up a large coal area north and west of the river. This set the stage for expansion of collieries at what is now Coalhurst and Diamond City and at the former village of Commerce, and the eventual opening of smaller mines such as the Taylor and Federal Mines. In addition, a large number of bore holes were put down and large acreages of coal lands were proved.

It was unlikely that coal miners saw it as the beginning of the end of their way of life. But in July 1912 The Canadian Western Natural Gas, Light, Heat and Power Company Limited began laying natural gas mains in the city, the actual hook-up to homes taking place in October. Many citizens resisted switching from coal to gas as coal mining was Lethbridge's main industry. Veteran newspaperman Harold G. Long said years later that he shovelled coal for a couple of years after gas arrived before taking the plunge to the new fuel. Long noted that it took coal miners a couple of decades before they began to follow the trend because it made them feel like traitors.

It soon became apparent that mechanized methods must supersede the older methods of hand loading and the use of horses for intermediate haulage of coal underground. William D. L. Hardie began the process locally by installing endless rope haulage in Galt Mine No. 3. The Standard Mine, developed by Christopher Storrar Donaldson in 1927 at what later became Shaughnessy, was a leader in the process of converting to electricity from compressed air. It was the first fully electrified coal mine in the Lethbridge area. By the mid-1940s conveyors of the shaker type, equipped with self-loading heads, were being used for loading the coal. Horse haulage had been outmoded by the use of 610-m belt conveyors for

The Galt Companies

Sir Alexander Tilloch Galt and Elliott Torrance Galt built 355 miles (571 km) of narrow gauge railway and 150 miles (241 km) of irrigation canals throughout southern Alberta and developed coal mines with a daily capacity of 2,000 tons (1815 tonnes). In all, the Galts formed eight companies in connection with their southern Alberta enterprises. It would have been easy to secure legislation to extend the life of any of them but shareholders would not take on additional responsibilities.

The companies were: North Western Coal & Navigation Company, Limited, formed in 1882, absorbed by the Alberta Railway & Coal Company in 1889; Alberta Railway & Coal Company, formed in 1884, absorbed by the Alberta Railway & Irrigation Company in 1904; Lethbridge Land Company, Limited, formed in 1888, absorbed by the AR&ICo in 1904; Alberta Irrigation Company, formed 1893, reorganized as the Canadian North-West Irrigation Company in 1899, absorbed by the AR&ICo in 1904; Great Falls and Canada Railway Company, formed in 1889 to build the Sweetgrass-Great Falls portion of a narrow gauge railway, sold to J. J. Hill of the Great Northern Railway in 1901; St. Mary's River Railway Company, formed in 1898, absorbed by the AR&ICo in 1904; and the Alberta Railway & Irrigation Company, formed by amalgamation of all previous Galt companies on 1 October 1904. It was known for a time as "The Group" but became best known by its initials, "The AR&I."

The AR&I company was purchased outright, partly by conveyance and partly by 999-year lease, by the Canadian Pacific Railway on 1 January 1912. (The CPR retained the corporate name, Alberta Railway & Irrigation Company, which is still listed on land titles as owning mineral rights to a large area of southern Alberta.)

The Montana and Canadian Railway Company was mentioned frequently around 1888 when a line from Lethbridge to Fort Benton was proposed. The company was never incorporated. [According to a 12 December 1888 Lethbridge News report, Elliott Galt had raised money in England to transform the Dunmore narrow gauge road to a broad or standard gauge road and, at the same time, to extend the railway to Fort Benton, Montana, to connect with the Northern Pacific, which had reached Benton in 1887. This was the source of the rumors about the establishing of a new company. The railway to Benton was never built although a narrow gauge line was extended to Great Falls in 1890. It was all part of an effort to open new markets for Lethbridge coal.]

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George Washington Houk and his wife, Victoria.

- In October 1935 the mine was leased to Joseph J. (Joe) Hamilton. The mine was worked seasonally over the next six years by Hamilton. Little new development work was done and much of the output seemed to have been taken from old pillars in the mine. There was some encroachment into Galt No. 8 leases. Hamilton extracted in the order of 115 000 tonnes of coal during the six years he had the mine.
- On 9 March 1936 a memo indicated that the mine was in retreat and that there was squeeze (over-stressing) on some of the remaining pillars and stumps in the mine. This was probably the result of the removal of many of the pillars and barrier pillars left to support the roof during earlier development work.
- The mine was officially abandoned on 15 September 1941 due to the lack of any more recoverable coal in the workings.
- The final entry in the file was a memo from Idwal N. Potter, district inspector, to the director of mines. It noted that Mine No. 54's entrances were adequately sealed when he checked them on 12 August 1963.

Mine No. 0055

Mine No. 0055, generally known as Russell's Mine, The Russell Mine and occasionally as The Pothole Mine, also Holton's Mine and Loxton's Mine, was located on Pothole Coulee in Lsd 8, Sec 18, Twp 7, Rge 21. The seam was at a depth of 18 to 37 m and consisted of a shale roof, 1.07 m of coal, and a shale floor. Total production of the mine was 24 900 tonnes of coal. A seasonal operation, it had a long history of changes in lessee/operators, as follows:

Nicholas and Marcella Sheran

Nicholas Sheran (1841-1882) packed a lot of living into his 41 years. Born in New York City, he apprenticed as a printer, then spent several years on Arctic whalers. He served in Company C of the 99th Regiment, New York National Guard, as a second lieutenant and saw service during the Civil War. During his time in the Army, Sheran met a soldier named Joseph Healy and, after hostilities ceased, he accompanied him back to Montana. There he became involved with John Jerome Healy, Joseph's older brother, and even in 1866 somewhat of a legend on the Montana frontier. Sheran became an Indian fighter, prospector and trader.

About June 1874 he came to Fort Whoop-Up, an American whiskey-trading post established in 1869 by Alfred Baker Hamilton and Johnny Healy. Sheran likely was familiar with the place and may have visited the post on occasion. He drew on the boating skills acquired as a boy on Arctic whalers and established a ferry service, consisting of two flat-bottomed rowboats, across the Belly River about 750 m northwest of the fort. He grubbed coal from a 45-cm seam in his spare time, selling the surplus to the Whoop-Up traders.

The North-West Mounted Police established the first Fort Macleod on an island in the Old Man's River on 13 October 1874. Sheran saw a larger market for his coal and moved downriver to The Coal Banks when a 1.5-m thick seam was exposed. By December NWMP work parties were hauling coal from Sheran's mine.

Sometime in 1877 Marcella Sheran (1844-1896) left New York and travelled to Fort Benton, then on to the Belly River country in the North-West Territories. [It has been impossible to document any of this as her name simply does not appear in obvious sources such as the Fort Benton Record or the Macleod Gazette.] After her arrival, she proved to be a valued partner to her brother as she had a sharp business sense and some book-keeping ability. She married Joseph McFarland of Fort Macleod on 4 July 1878 and went to live on his Pioneer Ranch.

In spite of vociferous opposition from his sister, after 1878 Nicholas Sheran lived common-law with a Peigan Indian woman called Mary Brown. Two children were born of the union: Charles, in February 1880; and William, in November 1882. Sheran never saw the second boy as he [Sheran] had drowned at Kipp's Crossing of the Old Man's River the previous May.

Marcella Sheran McFarland managed her brother's estate with considerable skill until her death from pneumonia in October 1896.

For additional information on Nicholas Sheran and his sister, Marcella, see Johnston (1983).

Gas in Lethbridge Coal Mines

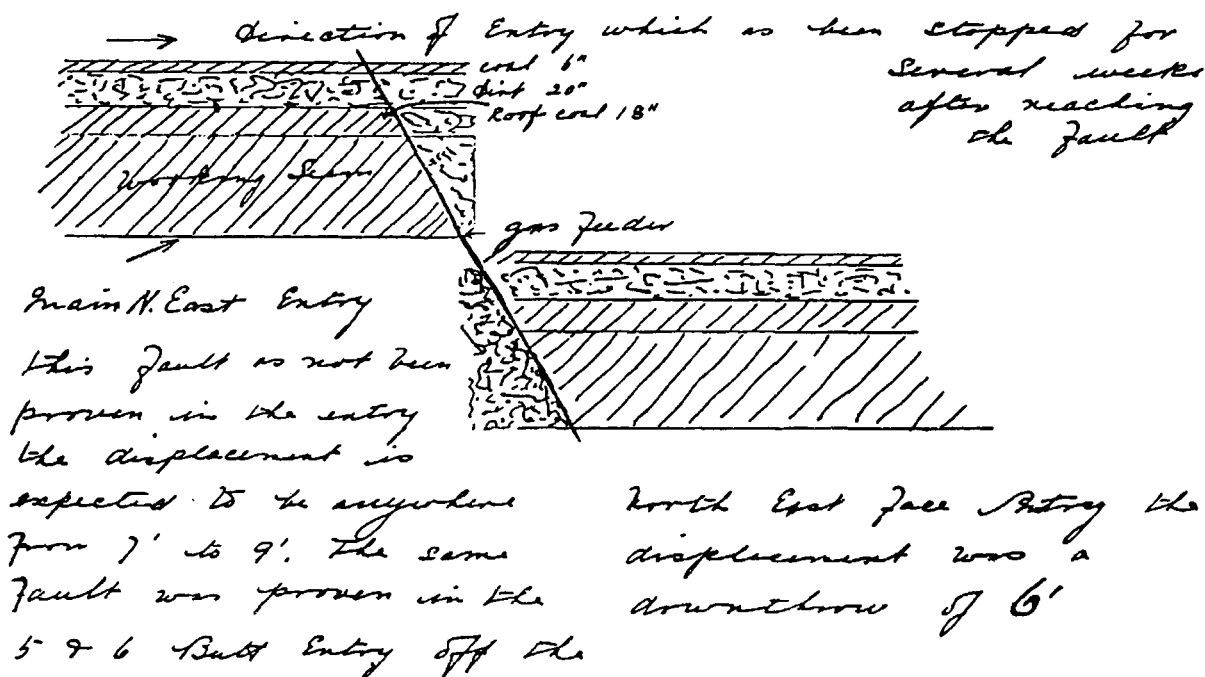
The Lethbridge coal mines were not considered to be gassy but gas did occur and constant vigilance was necessary.

The gas in coal mines is methane, also known as firedamp. It is a colorless, odorless, highly flammable gas, which can be explosive if mixed with air. Methane is the main constituent of natural gas. After-damp, the killer gas present in a mine after a fire or an explosion, is mostly nitrogen and carbon dioxide, with traces of free hydrogen and carbon monoxide.

The gas that was present in Lethbridge coal mines tended to come from cracks and crevices in the coal seam when miners drove through the many faults that characterized the field. As mine managers put it, "Guard against gas ignition when going through faults or troubled ground." The gas was often emitted in a small jet or "feeder," which, on ignition, produced a flame two or three inches long. Enough gas was present that it could occasionally trigger explosions, usually of a localized nature.

The diagram below was prepared by a mine inspector in connection with his investigation of burns suffered by a workman at the Chinook Coal Company mine at Commerce. Gas from feeders near a fault had collected in a pocket on the ceiling. When the workman stood erect under the pocket the open flame from his miner's lamp ignited a small explosion. Safety lights were in use by 1911, at least in the larger mines, and lessened the problem.

Managers watched mine ventilation closely. First and most important, it provided working men with an abundant supply of fresh air. Second, it diluted and vented poisonous gas before it could become hazardous. A small explosion of methane gas, particularly in dry mines, caused coal dust to go into suspension, thus setting the stage for a far more serious secondary explosion. [There were indications that this happened at Hillcrest, Alberta, in 1914, killing 189 men.] Such explosions knocked out the ventilating system and instantly used up two-thirds or more of the oxygen in the mine, replacing it with carbon dioxide.



after and by 6 July 1909 Townsley was sinking a slope at another point on the lease. Again, he was down about 20 m but had not reached coal. By 22 November 1911, the slope had been driven 82 m and had reached a 60-cm seam of coal. A report of 7 September 1912 indicated the mine was closed down, entrance to the mine fenced, no one around and all houses vacant. And on 11 February 1913 a final note in the file said that the mine had not operated for the last two years.

This mine was located in an area where such infamous people as David E. (Dave) Akers and Thomas Lee (Tom)

Purcell extracted coal in the 1880s and 1890s. [Both men were deeply involved in the illegal whiskey trade of 1869-1874. Purcell, particularly, continued to run booze into Canada from the United States until the mid-1890s. Purcell shot and killed Akers at the former's place on the Pothole in December 1893. He was convicted of manslaughter and sentenced to three years in Stony Mountain Penitentiary in Lethbridge's first murder trial.]

A record of all coal production was legally required from all mines. It seems obvious, however, that a few tonnes were taken from this one. A permit system was in place

On 24 November 1937, Holton & Minor registered "Russell Coal" as the trade name of the coal being taken by them from the mine.

Mine inspectors had their problems with George Russell and the succession of lessees, as they did with many small operators, usually involving the sending in of reports and other documentation, qualifications of mine employees, surveys and ventilation in the mine.

The mine was abandoned on 14 April 1941, at the close of the 1940-41 season.

Mine No. 0056

Located in Lsd 2 and 3, Sec 7, Twp 7, Rge 21, in the coulees west of the CHEC-Radio transmitter on Highway No. 5, the total production from this mine was 66 836 tonnes of coal. There were two seams at depths of approximately 38 and 42 m. Composition of the top seam was 46 cm coal, 8 cm clay, 23 cm coal with a rock roof and floor; of the bottom seam, shale roof, 51 cm coal, 18 cm blackjack, 31 cm coal and a shale floor. Known originally as The Old Houk Mine but more commonly as The Baker Mine, it was owned and/or operated by:

George Houk	1902-05
Thomas R. Baker	June 1909-10
Thomas H. Baker & Son	Apr 1910-15
Edward Oliver & Sons	June 1915-17
Benjamin Oliver	June 1917-18

Abandoned: 16 February 1918

William Urwin	Feb 1920
John Rollingson	Oct 1920-22

Abandoned: 13 February 1922

Roscoe J. Baker	July 1923
Arthur Bembridge	Aug 1923-24

Abandoned: 31 March 1924

Razzolini, Filestino & Loxton	July 1927-28
Razzolini & Filestino	Jan 1928
Albert Razzolini	Oct 1928-29
Razzolini & Bonetti	Oct 1929-30
Razzolini, Bonetti & Pederzolli	May 1930-32
Razzolini, Pederzolli & Bridarolli	Aug 1932-33
Razzolini & Bridarolli	Sept 1933-45
Albert Razzolini	Jan 1945-54

Abandoned: September 1954

The registered trade mark for coal from this mine was "Baker Coal."

George Washington Houk, a frontiersman of the Whoop-Up era, ran cattle in the vicinity in the late 1880s and, presumably, opened the mine at that time. Houk operated a wholesale liquor business in Lethbridge and may have rented the mine to others although markets would have been few.

Like all small mines in the region, this one produced coal on an intermittent basis depending on local demand. By 1916, four of Edward Oliver's sons had enlisted in the 113th Battalion, Lethbridge Highlanders, or the 175th Battery, CFA, and he was left to operate the mine by himself until his son, Benjamin, was discharged for medical reasons.

In 1917 Benjamin Oliver took over the lease from his father, Edward Oliver. Ben Oliver and his wife, "Sis" [Elizabeth Howard Oliver], worked as a team, she doing

George Rollingson

George Rollingson was born in Northumberland, England, on 10 April 1881. He went to work in the coal pits there as a boy of ten.

With his brother, John, he came to Lethbridge in 1902 where they got a job with George F. Russell in his Pothole Coulee mine. In 1904 there was a business disagreement between the brothers, the upshot being that John remained at the Russell mine while George returned to England.

George Rollingson continued to work in the coal mines in the Old Country but found time to marry in 1904 and start a family with the birth of his son, Henry, in 1906. (Another son, Albert, was born in 1923.) In 1913, probably sensing the opportunity for a better life, he returned to Canada and to Lethbridge.

He got a job as overman at the Malloy Mine near Picture Butte. But he spent much of his spare time trying to get started in a mine of his own. He secured a coal lease on a tract of land in the Pothole district from rancher Wm. D. (Curly) Whitney, paying him 50 cents per ton of coal mined. And whenever he was able, he put in time trying to develop the property. As soon as it looked as if the new mine might be a commercial success, Rollingson left the Malloy brothers and started on his own.

The new mine was located near the junction of the St. Mary and Oldman Rivers. Rollingson registered the name of the mine as "The Twin River Coulee Mine" and the brand name "Whoop Up Coal" for the product. The Mines Branch assigned a

the outside work and he doing the inside mining. One of her duties was to haul coal up an incline to the tippie, then help Mr. Allison, a local coal dealer, to load his wagon and to get up the coulee hill. In the evening Mrs. Oliver and baby Pearl usually came to the mine. The baby was placed in her blankets in a corner while the mother took over the drilling machine. "Sitting on an empty powder keg, she would bore holes in the face of the coal that I [Ben Oliver] had prepared for blasting. When all was ready Sis and baby were off home to make supper while I went back to fill the holes with powder and blast loose the next day's supply of coal."

There were two coal seams on the property, about 3.6 m apart. John Rollingson was the first to mine the top seam, apparently a seam other than the Galt seam. The mine was closed by R. J. Baker on 31 March 1924 and remained closed until 1927. The mine was abandoned in September 1954 because of too much water. The mine was worked for only two days a week but pumps had to be kept going for seven days--an uneconomical operation.

Mine No. 0092

Known successively as The Barnes Mine, The River-view Mine, Royal Collieries Mine and The Royal View Mine, this colliery was located in portions of Secs 29, 30, 31, and 32, Twp 9, Rge 21. The seam measured 1.2 m in

Robert Naysmith

Robert Naysmith passed away in the Van Haarlem Hospital, Lethbridge, on 5 July 1924. Only a few months earlier, on 18 March, he had been the last to ascend from the now-closed Galt No. 3 Mine where he had worked since 1897. Work had begun on the mine in 1890, it had opened in 1892, and full-scale development got underway in 1897 when W. D. L. Hardie became manager.

Naysmith was born in a little village in the Lothians on 3 July 1849. He went to work in the mines there at age 12. He emigrated from Scotland to the United States in 1888, worked briefly in Connecticut, then came to Lethbridge on 17 March 1889. Two days later he obtained work in what was then Drift Mine No. 7 in the riverbottom. From there he went to Galt No. 1 mine shaft when it became operational later in 1889. He went to Galt No. 3 mine shaft in the spring of 1897, where he was placed in charge of re-timbering. He worked in this capacity until his retirement and the closing of the mine in March 1924.

whereby "green men" worked under the closest of supervision from holders of Miner's Certificates and under direct supervision of a fireboss. The men were mostly Polish with a few German immigrants, all young, intelligent, in good physical condition and (important at the time) were strong anti-Communists. The intent was to train miners quickly and begin to replace the increasing number taking retirement. The training program started on the morning of 18 October 1948 and all indications were that it was successful.

The installation of up-to-date equipment had never ceased. On 13 December 1949 permission was sought by general manager J. M. Davidson "to install two 100-HP North British Flameproof Diesel Locomotives in Galt No. 8 for two purposes: man haul on each side of mine in accordance with plans submitted; and feeding cars to the loading end of conveyors onto which is loading a Clarkson Red Bird Loader on butt entries on the east side." Approval was given on 16 January 1950 and the locomotives were operating in the mine by July. Constant checking showed not a trace of carbon monoxide in the mine from the diesel fumes.

A report on 30 June 1950 noted, "Output per man is down, due to so many faults. At present there are 12 entries crossing faults."

An interesting coal storage project was conducted at No. 8 not long before it closed. We are indebted to R. Donald Livingstone for details of the experiment. He wrote:

"An experiment to store lump coal without oxidation and the resultant degradation of the product was carried out at No. 8. An initial attempt to place the coal in a trench and cover it with straw to exclude the sun proved ineffectual.

"This was followed by a new procedure which proved to be very beneficial and was later used in the

Drumheller field. The procedure allowed the building of a sizeable stockpile during the slack summer period ready for the fall and winter rush. In addition to being able to supply the market at an appropriate time, it allowed miners' services to be utilized during normally slack times and thus prevent the dreaded lay-offs. Up to 27 000 tonnes a year eventually were stored at Galt Mine No. 10.

"The procedure was as follows: As the coal was received from the mine, it was run over the tippie and the 2.5 cm size (slack) was separated from the oversize (lump). These sizes were then loaded at two separate chutes and transported by truck to the storage area. The coal could not be piled higher than about 2.7 m lest heating and spontaneous combustion take place. A ramp was built up which the lump truck backed to discharge the load onto the pile. The ramp was moved forward as the pile grew to a predetermined length, when a new windrow was started. A second ramp allowed the slack coal to be discharged on top of the lump coal, thus forming a protective layer to prevent oxidation and degradation. In the fall the pile was loaded out by a front end loader, dumped on a belt conveyor and fed back into the tippie screening and cleaning plant.

"The coal stored perfectly and thus the feast or famine type of market could be satisfied. So successful was the operation that E. A. Lovett, a director of Lethbridge Collieries Ltd. and an owner of a Drumheller mine, came to Lethbridge, viewed the arrangements and immediately returned to Drumheller where the system was put into practice, thus nullifying the competitive edge Lethbridge had enjoyed."

The first indication of closure and abandonment was in a letter of 28 December 1956 to the director of mines from R. Donald Livingstone, general manager, when he requested, "forward to us a copy of the form required under Section 109 (1) of the Coal Mines Regulation Act 1955 for the abandonment of a mine." Completed forms were sent to Edmonton on 16 January 1957 and showed the intention to abandon the entire underground workings of No. 8 mine. Reason for abandonment was given as "Decrease in coal production enables the requirements [of the market] to be obtained from one mine [Mine No. 1263] thus increasing efficiency. Plans called for "Cessation of all mining, recovering of valuable equipment, blocking off shaft bottom and filling of hoisting and air shafts. Cessa-

Shipment of Native Coal

A Medicine Hat despatch of the 26th says the first shipment of coal from the Northwestern Mining and Transportation Company, Woodworth's mine, was made today, west to Calgary, being the first instalment of a 907-tonne contract they have made for that place, and the first native coal ever shipped west by rail in the Northwest. The coal is all that could be desired, burning clearly, without bad odors from gases, and forming a white ash and no clinkers. In about ten days, Woodworth will be in a position to deliver 454 tonnes per day.

The Winnipeg Daily Times 27 September 1883

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Spec

HD 9554 C2 J6 1989 c.3
Johnston, Alex,
Lethbridge, its coal
industry

(1 map in pocket in front)

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"Power from the Land"

The cover photograph was used in a 1987 British Coal Corporation advertising campaign and was designed by CM:Spectrum Ltd., 21-23 Meard Street, Soho, London W1V 6PA. The copy we saw appeared as a full-page advertisement in a September 1987 issue of The Sunday Times of London. We contacted the Hon. Mary J. LeMessurier, Agent General in the United Kingdom, Alberta House, 1 Mount Street, London W1V 5AA. She brought our request to use the photograph on the cover of "Lethbridge: Its Coal Industry" to the attention of Sir Robert Haslam, Chairman, British Coal Corporation. Sir Robert Haslam approved the request and turned the correspondence over to Norman Woodhouse, Director of Public Relations, British Coal, Hobart House, Grosvenor Place, London SW1X 7AE. Woodhouse suggested that, in order to obtain the necessary artwork, we should contact Harris Howland, The CM Partnership Ltd., 9-13 Cursitor Street, London EC4A 1LJ. Mr. Howland then forwarded a large transparency from which the cover photograph was derived. We are pleased to acknowledge the use of the photograph as follows:

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